

OUR POLICY

Our business was established on a quality basis.

It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

Our theory is that we can best serve ourselves by supplying our customers the best goods. Our acts have made this Theory a Policy, for we have not merely the desire to make the best goods but the means of converting that desire into a Reality.

In thirty years in the photographic business there have been several revolutionary changes. Doubtless there will be many more. Whatever they may be our Policy shall be to furnish (without following every mere will-o'-the wisp) the very best of those goods which painstaking testing shall prove to be of benefit to our customers in the Simplification of Photographic Processes and the Advancement of the Art.

C. K. Co., LTD.



FROM 1915 KODAK ADVERTISING CONTEST

By W. S. Ellis
Philadelphia, Pa.



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

ESTABLISHED 1901

ESTABLISHED 1906

VOL. 7

JANUARY 1916

No. 11

THE ADVERTISING CONTEST PICTURES

The 1915 Kodak Advertising Contest differed from previous contests in some respects and the results, while equally satisfactory, covered a more definite and varied class of advertising subjects. First and second prizes were awarded for pictures illustrating each of five of our most popular advertising slogans.

As there was an equal incentive for competition in each class, the popularity of a particular slogan did not have the effect of directing greater effort towards one kind of advertising illustration than another.

The conditions were very much the same as one would encounter if given a commission to do a piece of photographic work for any advertiser, with the understanding that the picture was to illustrate some certain use of the article advertised or appeal to some certain class of readers.

Each of the five slogans determined the general nature of the picture that was to be made. The picture must fit, but it was left to the photographer to originate the picture idea that, in combination with the slogan, would make the reader want a Kodak.

The making of advertising pictures might be considered the commercial photographer's business, but the originating of picture ideas that will sell goods is anyone's business.

The advertiser will go to a commercial photographer to have some particular idea carried out—in fact, the commercial photographer often furnishes an attractive model and makes the pictures—but if the idea itself is to be originated, where is the advertiser to find a photographer who wants the commission?

Just here is where one of your opportunities is wandering aimlessly about without a door to knock on.

Of course, some photographers

are more apt than others at such work. Some grasp an idea quickly and in working it out can put a lot of life and snap in a picture—and that's what the advertiser wants.

Each of our contests has developed new prize winning talent and these photographers, as well as many whose pictures were not awarded a prize, have it in them to do just as good illustrative work for other advertisers as for us.

The prizes in the 1915 contest were awarded as follows:

Class I.

- First Prize—W. B. Stage,
New York.
Second Prize—Geo. J. Botto,
New York.

Class II.

- First Prize—H. V. Roberts,
Utica, N. Y.
Second Prize—W. B. Stage,
New York.

Class III.

- First Prize—John Baldridge,
Waldron, Mich.
Second Prize—Jas. J. Ryan,
Berkeley, R. I.

Class IV.

- First Prize—Julius Schabtach,
Buffalo, N. Y.
Second Prize—John S. Neary,
Trenton, N. J.

Class V.

- First Prize—Chas. E. Mace,
Estes Park, Colo.
Second Prize—Percy DeGaston,
Tropico, Calif.

Class VI.

- Wm. S. Ellis, Philadelphia, Pa.

Our space does not permit us to show all the pictures that won prizes or were purchased, but those shown are excellent examples of pictures that have a selling punch. They are human interest pictures that tell their story—that create a desire for the goods they advertise.



BUSINESS CONDITIONS

Just look at a few figures indicating the business progress of the year 1915.

Saving Deposits in October, \$710,336,000. Previous record, \$693,339,000.

Wheat crop in western provinces, 341,585,000 bushels. Previous record, 200,000,000 bushels.

Canadian exports in October, \$84,102,000. Previous record, for any month, \$60,402,000.

November bank clearings at Winnipeg, \$242,030,654. Previous record, \$209,574,750.

C. P. R. net earnings in October, \$6,579,434. Previous record for any month, \$5,602,858.

Dominion Government revenue for November, \$17,072,456—the largest total for one month in the country's history.

Figures like these are good antidotes for pessimism.



Seed R Plates combine extreme speed with the finest qualities of the ideal portrait plate.

It's a Seed Plate you need.



FROM 1915 KODAK ADVERTISING CONTEST

"Take a Kodak with you"

*By W. B. Stage
New York, N. Y.*



ARTURA BRILLIANCY

One may say there is an equal difference between brilliancy and contrast and brilliancy and flatness, and it is quite certain that a negative or a print cannot be either contrasty or flat and still be brilliant in the sense that the word applies to a photograph.

Balance of light and shade has something to do with brilliancy—with the possibility of securing it and the pleasing effect it produces—but it is primarily a matter of the registering of tones in a negative by proper exposure and the selecting of a paper that is capable of reproducing those tones in a print.

We will say for example, that the average well balanced portrait lighting consists of twenty degrees of light intensity or gradation from the highest point of highlight to the deepest shadow.

To secure a negative with the greatest amount of brilliancy, or roundness, as you choose to call it, the exposure must be sufficient to record all of the twenty degrees or gradations of light.

With an exposure so short that only ten degrees of gradation are recorded, the negative will be contrasty. This is a very common fault in negative making that many photographers attempt to correct by using a soft paper.

The harshness of contrast may be materially subdued, but the

result is not brilliancy. A greater number of tones cannot be produced because they are not in the negative. Yet the passable result secured in printing is allowed to pass and under-exposure becomes a habit.

With proper exposure of the plate all twenty degrees of gradation are secured in the negative and the result is as round and brilliant as could be desired. The contrasts of the first negative have been reduced 50% in the second, and properly exposed negative, by the addition of ten degrees of gradation. And it is of the utmost importance that the paper selected for printing this negative should be one that is capable of reproducing the entire twenty degrees of gradation, otherwise the brilliancy recorded in the negative is lost in the print.

With over-exposure of the negative the twenty degrees of gradation are first registered and then gradually destroyed as exposure proceeds beyond the point where the greatest gradation is secured. Over-exposure often reduces gradation five or even ten degrees, in which case no greater number of tones can be represented in the print than in the case of the contrasty negative.

In such a case it is necessary to resort to a contrasty paper—but again the result is not brilliancy.

It is easy to see that the fault of the negative cannot be cor-



FROM 1915 KODAK ADVERTISING CONTEST

"All outdoors invites your Kodak"

By H. V. Roberts
Utica, N. Y.



rected by the paper used. Under or over-exposure causes contrast or flatness, and while the softness or contrast of a paper may make a print more pleasing, additional brilliancy is never secured.

It is also quite plain that the brilliancy of a perfect negative cannot be recorded in a print if the paper used is either so contrasty or so soft that it will not produce a scale of gradation equal to that of the negative.

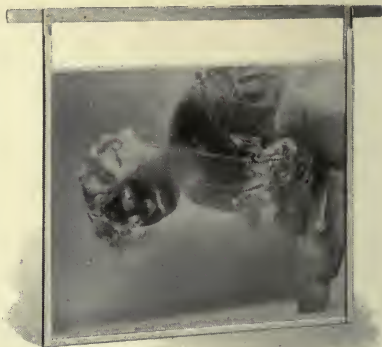
Artura has the longest scale of gradation of any developing-out paper on the market. It will produce the most brilliant print it is possible to secure from a brilliant negative. It has sufficient latitude to secure more, or less contrast, where negative quality varies within reason, but the best print results are secured from properly exposed and developed negatives.

If your negative and print quality are both at fault, the foregoing may point out your error. Your negatives of a few years ago may also help you to see the errors of your negatives of to-day.



*Royal
Polychrome
Plates*

*will help you to secure better
negatives from difficult
commercial subjects.*



CORE PLATE DEVELOPING RACKS

For the portrait or commercial photographer who has large quantities of work the Core Plate Developing Racks will be found a great convenience in tank development, not only in handling the plates in the developer but in subsequent handling as well. Plates may be developed, fixed, washed and dried without being removed from the racks.

The plate may be examined during development without touching the gelatine emulsion, lifting it from the developing or fixing tank in its metal rack. The danger of finger marks is entirely removed, and as the top does not go down into the solution there is no need of putting one's finger in the developer.

As will be seen by our illustration, the rack is of very simple construction, the sides form-



FROM 1915 KODAK ADVERTISING CONTEST

"There are no game laws for those who hunt with a Kodak"

*By John Baldrige
Waldron, Mich.*



ing a groove which holds the plate as it is slid in from the top.

The top bar is a flat strip of metal which projects beyond the rack proper and rests on the edge of the tanks used for developing, fixing and washing.

There is sufficient space between the top bar and the plate to allow it to be covered by the solutions at all times, also to be conveniently handled when it is being examined.

After the plates have been developed, fixed and washed, they may be set in drying racks or hung up to dry without being removed from the developing racks.

The metal used in these racks is non-corrosive and as the rack is used for washing as well as developing, the rack and plate are washed at the same time. These racks may be used in any developing tank of proper width. Movable cross bars may be made for large tanks and these can be placed the proper distance apart to take any sized rack.

CORE PLATE DEVELOPING RACKS

	Width of Rack	Width of Top Bar	Each
4½ x 6½ }	6½ in.	8½ in. . .	\$.50
4¾ x 6¾ }			
5 x 7 }	7 in.	9¾ in. . .	.50
6½ x 8½ }	8½ in.	10¾ in. . .	.60
8 x 10 }	10 in.	12¾ in. . .	.60
8 x 10 }			
10 x 12 }	10 in.	12¾ in. . .	1.10
11 x 14 }			
14 x 17 }	14 in.	16 in. . .	1.60

F. O. B. Rochester, N. Y.



EASTMAN FILM DEVELOPING BOX No. 2

As with plates, the tank method of developing Portrait Films has been found most satisfactory and convenient and is now in use by most film workers.

The Eastman Film Developing Box for 8 x 10 or 5 x 7 films created a demand for a smaller box that would hold only the 5 x 7 size. This will be known as the Eastman Film Developing Box No. 2.

The box is made of hard rubber and will accommodate six 5 x 7 films in the Film Developing Holders which are furnished for tank development. The holders fit in grooves in the ends of the box. These grooves prevent the holders from moving about and keep the films separated during development.

While this box is made for the development of film, it may also



FROM 1915 KODAK ADVERTISING CONTEST

"Write it on the film—at the time"

*By Chas. E. Mace
Estes Park, Colo.*



be used for developing plates in the Core Plate Developing Racks. It will conveniently hold a dozen plates in these racks and allow room for moving them about sufficiently to agitate the developer.

Eastman Film Developing

Box No. 2 . . . \$3.00

F. O. B. Rochester, N. Y.



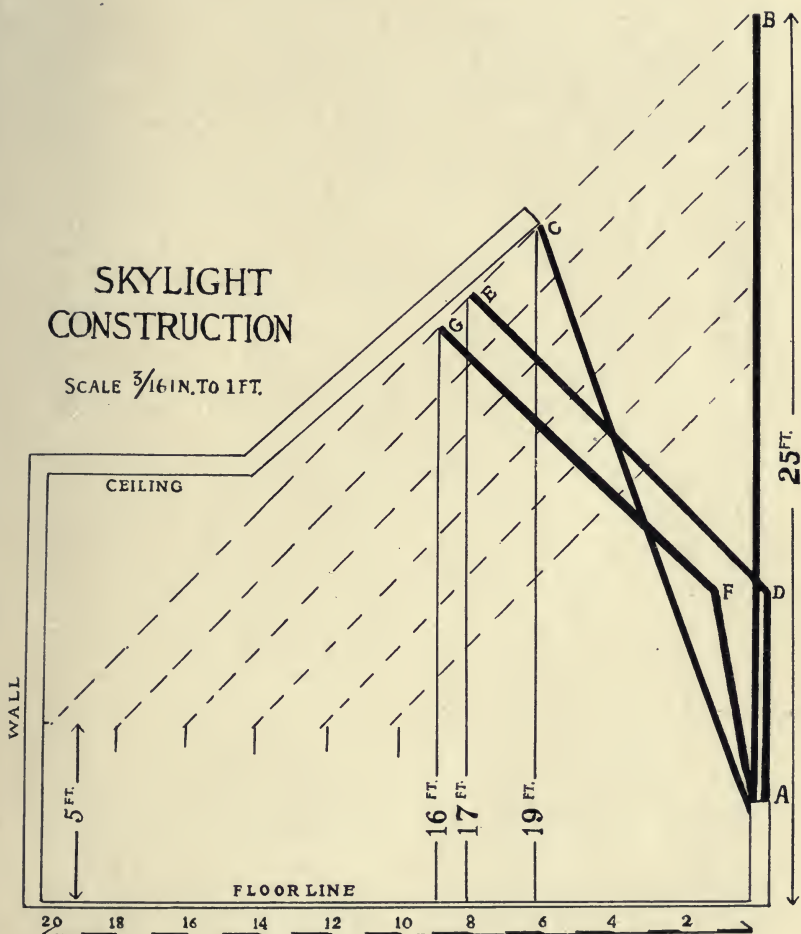
THE PHOTOGRAPHERS' SKYLIGHT

The matter of skylight construction for a photographic studio has always been debatable and any one seeking information on this subject experiences difficulty in obtaining advice which might be considered as authoritative.

The principles governing skylight construction are, however, extremely simple and it was on account of numerous requests for information on this subject that we published some years ago in *STUDIO LIGHT* an explanation relating to the construction of a single slant skylight. Many photographers are, however, so situated that a single slant light does not meet their requirements. It therefore occurs to us that a supplementary article explaining the principles involved in the construction of skylights of various types will be of interest.

The accompanying diagram represents a cross section of a photographic studio 20 feet wide

and 12 feet high. In this diagram the skylight comes within 3 feet of the floor and the vertical line A-B represents the simplest form of skylight construction. This is the form of "skylight" usually available when making home portraits in private houses. The dotted lines represent the general direction from which light is assumed to fall when entering any room through either a window or skylight. A glance at the diagram will show that if a vertical light were to be built for a room 20 feet wide, it would necessitate extreme height in order to secure illumination for the entire width of the room. Light falling in a straight line at an angle of 45 degrees from the top of the window should strike the opposite wall at about 5 feet from the floor to fully illuminate the room. In home portrait work where the height of an ordinary window does not exceed 8 or 9 feet it would be necessary to work very close to the window and the taking of large groups would not be practicable even in a large sized room. A vertical light for a room 20 feet wide should be 25 feet high. In an ordinary studio, the construction of a light of this description would be out of the question, but for the photographer who can erect a studio building where a room of spacious proportions and stately height could be built, a vertical light constructed of plate glass with



leaded sash would be the last word in efficiency and impressiveness. Photographers who have the opportunity to build a light of this description are, however, so very few that we merely mention this in passing as the most simple form of light.

In considering the next form, commonly known as the "single slant light" which is represented by the line A-C, we have a sash placed at an angle of 70 degrees. The extreme height, from the floor, at the peak for a room 20 feet wide is 19 feet. If a skylight is to be constructed for a room of less width the proper height can easily be determined. This diagram is drawn to a scale of $\frac{3}{16}$ inch to a foot. Lay a rule on the diagram and measure the distance from the floor to a point where the dotted lines, for a room of any specified width, intersect the heavy black line. By taking the distances in inches and dividing by $\frac{3}{16}$ the result will be the height in feet. Experience has shown that for a single slant light the best angle at which sash should be placed is 70 degrees. This for the reason that a steeper angle would necessitate an unreasonable height and if light were placed at a lower angle there would be very considerable danger of breaking glass when moving back-grounds, head screens, etc.

The form of skylight which is perhaps in most general use is

that indicated by lines A-D-E. This is what is commonly known as "top and side" and represents a vertical side light extending to an average height of 9 feet from the floor and a top light extending from this point at an angle of 45 degrees back far enough to intersect the dotted line representing the angle of light for a room of any given width.

The next form of skylight, commonly known as the "hip light," is represented by the lines A-F-G and is an excellent form of skylight construction, bringing, as it does, the average surface of the glass nearer to the subject. The lower sash being placed at an angle of 80 degrees and extending to a height of 9 feet from the floor permits of working very close to the light with back-grounds and other accessories. The upper sash running back at an angle of 45 degrees to the line of light intersection will give illumination to the extreme width of the room. As the curtains covering the skylight are operated at the plane of the glass this form of light permits of great concentration and accurate control. For either the form known as the "top and side" or the "hip" light the proper angle for the upper sash is 45 degrees for the reason that in this position light strikes the glass more nearly at right angles and passes through and into the room with least deflection.

The accompanying diagram and the above explanation relate to the proper heights and angles for skylights of various types—height and angle being the only factors which afford illumination to the entire width of the room. The width for a light has nothing to do with illumination beyond the angle of light intersection. The width is merely a matter of working convenience and depends largely upon the length of the room. Where there is sufficient length to permit of operating in either direction the most advantageous position for the light is in the center of the room and the light may advantageously occupy one-third of the whole side. With a studio of less spacious dimensions it would be advisable to leave a space of at least 4 to 6 feet at one end. The skylight may then occupy practically one-third of the remaining space, but if the room is very short it will undoubtedly be necessary to increase this proportion.



EASTMAN MASK CHARTS

are a real economy, because they afford the means of cutting accurate masks easily and without bothersome measuring.

The Great Event

MANY photographers regard a visit to the Eastman School of Professional Photography as the most profitable trip they could take, but there are still a few who fail to take advantage of this opportunity for brushing up their working methods by attending the lectures and demonstrations, and to pick up new ideas from rubbing shoulders with other men in the same line of work.

—
All are invited.

All come, please!
—

Dates for the School in Toronto are Feb. 22, 23 and 24, at St. George's Hall; for Montreal, Feb. 29, March 1 and 2, at Coronation Hall.



FROM 1915 KODAK ADVERTISING CONTEST

"Write it on the film—at the time"

By Percy DeGaston
Tropico, Cuiy.





FROM 1915 KODAK ADVERTISING CONTEST

"Let the children Kodak"

*By Julius Schablach
Buffalo, N. Y.*



MAJESTIC PRINT DRYERS

Majestic Print Dryers have had much to do with the promptness with which Christmas orders have been delivered in many studios during the past month.

Properly shaped, bone-dry prints in from fifteen to thirty minutes is schedule time for these dryers. You know how much longer it takes to dry prints in the natural way, and even then you aren't sure they are absolutely dry.

It's worth the price of a dryer to have the assurance your prints are in proper condition when delivered to your customer—to know they are not going to curl up in the folder or pull loose from their mounts, to say nothing of what may happen to improperly dried sheet prints.

The Majestic Dryers are right in principle. The print is given a backward curl in drying that really stretches the emulsion to such an extent that the most it can do is to come back straight. Bone-dry prints in from fifteen to thirty minutes depends on the temperature of the air forced through the drying rolls by the fan, provision being made for hanging a thermometer in the back of the dryer to determine the temperature of the air passing through the rolls.

THE PRICE

Improved Majestic Print Dryer No. 1, complete with drying rolls, electric motor, fan, gas heater and stand	\$30.00
Improved Majestic Print Dryer No. 5, complete as above	60.00
Extra Drying Rolls, 11-inch, complete	2.00
Extra Drying Rolls, 7-inch, complete	1.75
Extra Drying Rolls, 6-inch, complete	1.50
Extra Muslin-Faced Blotter, for 11 or 7-inch Rolls	1.40
Extra Muslin-Faced Blotter, for 6-inch Rolls	1.00

Order from your dealer.



BIRTHDAY ADVERTISING

The photographers' Christmas advertising was probably greater than any previous year, and we hope all those who advertised found it to be a profitable investment.

One of the novelties of this year's advertising was the use of posters. At the Indianapolis convention of the P. A. of A., it was suggested that the association have a suitable poster printed and that it be furnished the photographer at cost.

This was done, and we are told by Secretary Hoffman that the demand was so great that a second poster is to be furnished at equally small cost. The slogan used on this poster is "*Be photographed this year on your birthday.*" Beneath the slogan is a space for the photographer's imprint and above are two pictures, one of a baby and the other of a sixteen-year old girl. The lines



FROM 1915 KODAK ADVERTISING CONTEST

"There are no game laws for those who hunt with a Kodak"

*By Jas. J. Ryan
Berkeley, R. I.*



under the pictures read, "Miss May, Dec. 20th, 1900, one year old," and "Miss May, Dec. 20th, 1915, sixteen years old." It's a clever way of showing the necessity of having a picture of the boy or girl, each birthday, if there is to be a record of the wonderful growth and change. Of course it will also help to get the older folks into the studio.

To supplement this poster advertising, or to use where posters are not practical, the design is to be furnished in the form of window cards, mailing cards and one, two, three and four column electros for newspaper advertising. Prices may be had from John I. Hoffman, 12th and F streets, Washington, D. C.

Birthday advertising is good at any time of year and a great many photographers have found it practical and profitable to keep a card index of their customers' children, showing their ages and dates of birth. It's a very simple matter for the receptionist to ask a young man of six years how old he is and, if the boy says six, the mother will most always make some such remark as: "He will be seven the 9th of February."

The receptionist gets that date on her card without the mother thinking the question was asked for a reason, and so the card index fills up until a number of personal letters may be written each month suggesting pictures

on the boy or girl's birthday the following month.

The list may also be enlarged by making a record of all births announced in the daily papers and suggesting a picture when the child is old enough to bring to the studio. This card may be followed up each year unless a reasonable amount of solicitation fails to bring results, in which case the card should be canceled.

Such plans are all very good provided they are kept alive and they fit in very nicely with other birthday advertising. If you should use the birthday advertising slogan in posters, newspaper advertising, or other form, we would suggest that you make the display in your show case a birthday display and have some part of it carry out the idea of the poster.

As Mr. Hoffman can supply you with cards suitable for your show case and for mailing it will be a simple matter to make an appropriate display as well as to use the idea for your mailing list if you happen to have one.

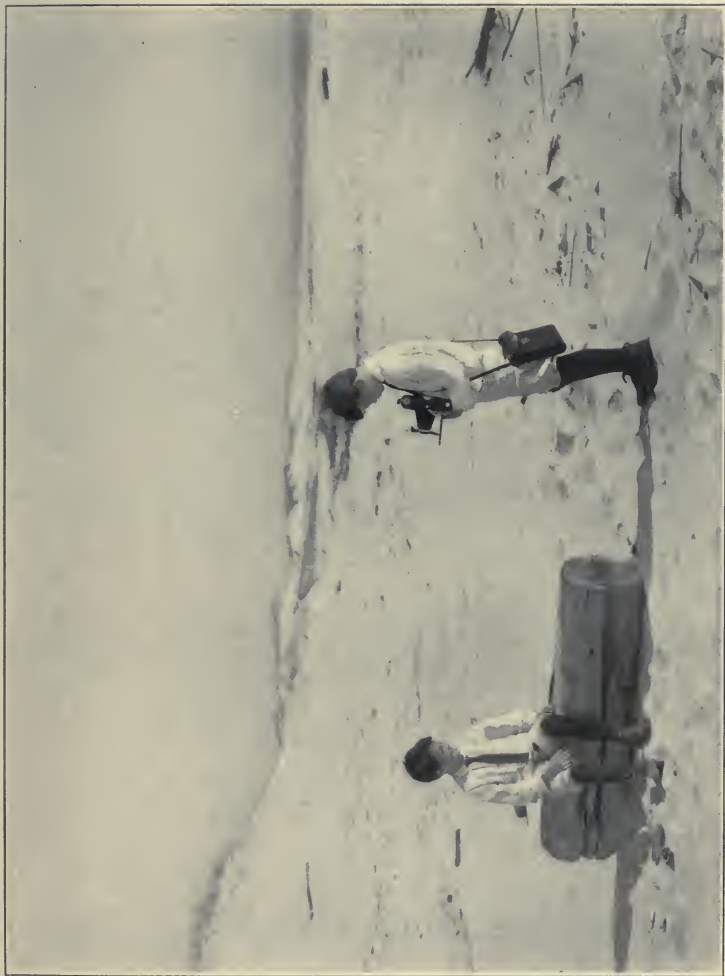
And with the Christmas business out of the way you can't start another advertising campaign too soon.



Enlargements on

Artura Carbon Black

retain the contact quality.



FROM 1915 KODAK ADVERTISING CONTEST

"Let the children Kodak"

By John S. Neary
Trenton, N. J.



THE gift that doesn't
require an occasion
—that is always timely—
your photograph.

Make the appointment to-day.

THE
PYRO STUDIO



No. 221. Price, 50 cents.

THE ONLY CONDITION

We make but one condition in our offer of cuts for the use of photographers.

It is obvious that two photographers in the same town would not care to use the same cut, and we are therefore obliged to limit this offer to one photographer in a town. It will be a case of first come first served. The first order from a city will be promptly filled. Succeeding orders (if any) will necessarily be turned down and the remittance, of course, will be returned. It is also obvious that we cannot, on account

of the cost of the drawings, furnish any large variety of cuts at the nominal prices quoted, and therefore can offer no substitute cut. The thing to do is to get your order in *first*, as it would not be fair to give the man who happens to get in his order early one month a *permanent* advantage; we shall book no orders in advance. They must always specify the number of cut wanted. These cuts consist of the illustrations only, thus making it possible for the printer to change the wording or the amount of space to be occupied by the wording if so desired.

C. K. CO., LTD.

BULLETIN: THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY FOR 1916



Boston, Mass. Feb. 8, 9, 10

Buffalo, N. Y. Feb. 15, 16, 17

Toronto, Ont. Feb. 22, 23, 24

Montreal, Que. Feb. 29, March 1, 2



*Begin the New Year with a
New Studio Register System*



EASTMAN LOOSE LEAF STUDIO REGISTER

Contains index and one hundred leaves, any one of which may be removed at will and new leaves inserted. Provides for full record of all orders, both cash and credit transactions. Heavy covers, leather back and corners.

Price, \$2.50

Canadian Kodak Co., Limited,

Toronto, Canada.

All Dealers'.

EASTMAN CARD INDEX STUDIO REGISTER



LENDER ACCOUNT			
DATE		DEBIT	CREDIT
May 10	To One Meter Color		
June 6	By Cash	150	
	Same 41	200	
			350.00
BUTLER STEAK MARKET			
DATE		DEBIT	CREDIT
247	June Frank R. Goodrich		
July 31/0	44 King St., Rochester N.Y.		
6047	12	Arline	Fogarty
1000	July 24/0	July 24/0	Aug 7/10
Residing		(Commotion Signature)	
Date	Debit	Date	Credit
Apr 12/10	100	July 24	1000
		Aug 7	1000
			200

The only complete and practical card index system for the correct keeping of studio accounts. *Only one card for the complete transaction*, whether cash or credit. The Eastman Studio Register System is the simplest, most practical and most economical system ever devised for the correct keeping of studio accounts. Includes quartered oak Desk Box, quartered oak Transfer Box (holding twelve hundred cards), two full sets of alphabetical guide cards (date guide cards, one full set), monthly guide cards, and appointment guide card, and three hundred special ruled register and ledger account cards.

THE PRICE

Eastman Studio Register System complete, \$6.25

Canadian Kodak Co., Limited,

Toronto, Canada.

All Dealers'.

Authorities agree that negatives of the best printing quality are secured by the use of Pyro as a developing agent.



The chemical in its most convenient form:

Eastman Permanent Crystal Pyro

The clean, clear crystals are easy to handle—do not deteriorate—give off no flying, stain producing dust.

It is one of the Tested Chemicals.

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

MADE IN CANADA

ROYAL POLYCHROME PLATES

are not panchromatic, but are sensitive to deep orange, that is to say they respond to all colours except the deep reds. Invaluable for general commercial work, for with a K2 filter, they give negatives with a faithful rendering of colour values.

Regular Royal prices apply with a nominal extra charge for backing, when so ordered.

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

*To keep the quality right, keep the
time and temperature right*



The Eastman Thermometer Stirring Rod

Is a convenient type of thermometer as well as a good stirring rod. The temperature of solutions may be seen at a glance as chemicals are being dissolved or during development.

Keep the temperature right and avoid trouble.

Eastman Thermometer Stirring Rod, \$.60

The Eastman Timer



makes it simple to time exposures with accuracy and uniformity. The hand splits seconds—the large dial is plainly marked and easily read. The timer runs thirty hours.

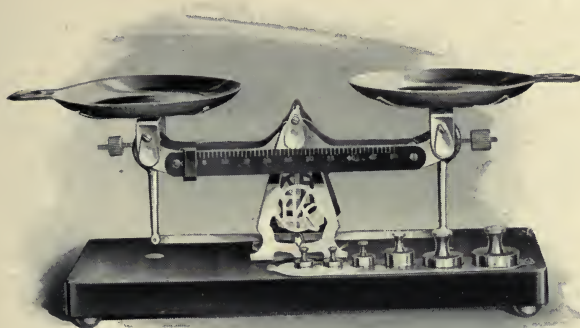
*Time right for best
results.*

The Eastman Timer, \$2.00

Canadian Kodak Co., Limited,

All Dealers'.

Toronto, Canada



Accuracy and convenience combined in the

Eastman Scale

Will weigh from one to fifty grains by simply adjusting a sliding weight on a beam—accurately tested weights from fifty grains to two ounces are used for weighing larger quantities.

All weights are plainly marked in grains as well as ounces or fractions of an ounce avoirdupois. All metal parts are nickered except beam for weighing grains, which is black enameled with white markings. All bearings are of hardened steel and the balance has an extremely sensitive adjustment.

THE PRICE

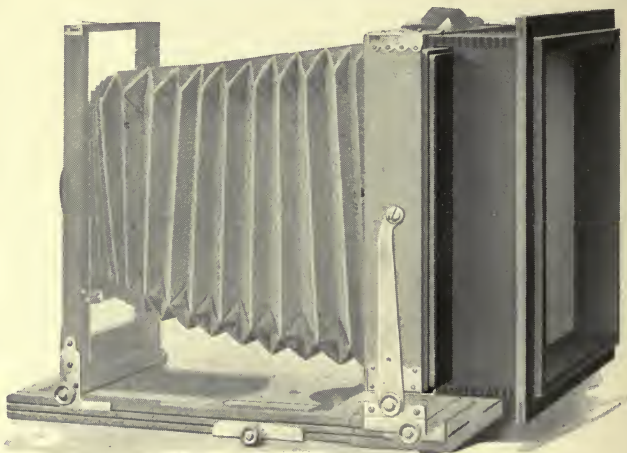
Eastman Studio Scale . . . \$4.00

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

*Create a demand for large prints from small negatives—
and get the long profit by making them yourself.*



The R. O. C. Enlarging Back

Readily adapts the ordinary view camera to enlarging with either artificial or daylight.

Made in $6\frac{1}{2} \times 8\frac{1}{2}$ and 8×10 sizes to fit Empire State and Premo View Cameras. Adapters to fit Century, R. O. C. or Eastman View Cameras supplied without extra charge.

With this enlarging back attached to your view camera the rest of the outfit is quite simply made with little trouble or expense.

*"Enlarging for the Professional," an interesting booklet
on enlarging processes, mailed free on request*

Canadian Kodak Co., Limited,

All Dealers'.

Toronto, Canada.

For copying old photographs,
printed matter, or other
black and white
objects, use

ROYAL PROCESS PLATES

They yield negatives having
all the density and snap
that you can desire

*Regular Royal Prices apply, with a
nominal extra charge for backing*

Canadian Kodak Co., Limited,
Toronto, Canada.

All Dealers'.

A NEW YEAR POINTER

Display your Small Style Folders and make one of these

The Creston



Colors:
Grey, Buff and Brown.

For 2 x 4, 2 x 6 and 3 x 4 Black
and White and Sepia Tones.
Print Slipped Under (Inslip).

The Creston is an exceptionally good style to use in the early months of the year. And you will find a ready sale for the half cabinet and split panel prints right now, and many extra dollars can be added to your sales now that the Xmas rush on high grade folders has passed.

This is a style you can put out at a reasonable price and still not affect your better class of trade.

Sample of One Size Mailed Free.

Canadian Card Co., Toronto, Can.

OUR POLICY

Our business was established on a quality basis.

It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

Our theory is that we can best serve ourselves by supplying our customers the best goods. Our acts have made this Theory a Policy, for we have not merely the desire to make the best goods but the means of converting that desire into a Reality.

In thirty years in the photographic business there have been several revolutionary changes. Doubtless there will be many more. Whatever they may be our Policy shall be to furnish (without following every mere will-o'-the-wisp) the very best of those goods which painstaking testing shall prove to be of benefit to our customers in the Simplification of Photographic Processes and the Advancement of the Art.

C. K. Co., LTD.



ARTURA PRINT FROM DEMONSTRATOR'S NEGATIVE



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

ESTABLISHED 1901

ESTABLISHED 1906

VOL. 7

FEBRUARY 1916

No. 12

SLOGANIZED

When your goods have some one outstanding feature that other goods do not have and cannot have, that is the feature to advertise. It has taken a long time to discover it and epitomize it, but the product of the photographic studio has just such a selling point.

Every newspaper, every bill board, every magazine, every show case ought to be talking that selling point. And they should keep it up until every man, woman and child in the country has seen it, read it and heard it. And then they should keep it up so that no man, woman or child can forget it. That selling point not only exists but it has been sloganized:

"Your friends can buy anything you can give them—except your photograph."

There's a truth there that ought to be rubbed in. Our March advertising will carry the

message to millions with full pages in *Harper's*, *Century*, *Scribner's*, *Everybody's*, *Cosmopolitan* and *World's Work*, with quarter pages in *Ladies' Home Journal* and *Saturday Evening Post*, *Collier's* and other important publications. Just so that you can get it promptly into use we are sending you, herewith, a small card for your show case. But you ought to go into the newspapers with this same slogan—over your own signature, of course. Print it, print it. Talk it, talk it.

Easter doesn't come this year until April 23rd. There will therefore be more than the usual display of new gowns and new hats, which means that there should be more than the usual number of photographs used for Easter cards. Last year our magazine advertising suggested the idea of the photograph for Easter. We shall repeat the idea this year in new, and we think, unusually attractive form. Something suggestive of our usual

"photographer in your town" advertising, yet somewhat different.

You can pave the way for your Easter advertising by starting now the selling talk: "Your friends can buy anything you can give them—except your photograph."

We claim no credit for this phrase—except that we recognized it as a selling power and lassoed it. We don't even know just where it originated, but if we can all get together and *use* it, it will make business for everyone in any way connected with photography. It's a classic. It ought to be set to music.



ECONOMY OF DEVELOPERS

The present condition of the chemical market should call for extreme economy in the use of developing solutions.

By economy we do not mean the skimping of the developing agent in making up a stock solution. This would be the wrong sort of economy, for the balance of the solution would be destroyed and the result would be disastrous. But there are methods of economy that will conserve the developer without affecting the resulting print.

Some of our readers will remember how the silver bath, of albumen days, was conserved. The sheet of paper, which had

been floated on the silver bath, was carefully drawn over a glass rod across the end of the tray to drain all the surplus silver solution back into the tray. The paper was then placed between blotters and the silver absorbed by the blotters was also recovered. It would have been a crime to have destroyed those blotters.

But where is the parallel—how does this apply to developer, you say? It doesn't, except as to the use of the glass rod and the comparative expense of the material in which economy should be practiced. An ounce of developing agent such as Elon is, to-day, worth more than twice as much as an ounce of silver.

And an economy greater than that of the old days can be practiced in the use of developers, to-day, with a little care and no unnecessary delay in the process of developing prints.

By comparative tests we have found that a given amount of developer in an 11 x 14 tray will properly develop a certain number of prints. In order to develop the same number of prints in a 14 x 17 tray, approximately one-third more solution is required to do the work.

The reason is quite plain when the rapidity with which coal-tar developing agents oxidize when exposed to the air, is considered. The 11 x 14 tray exposes a surface of 154 square inches of the developing solution to the air while



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the 14 x 17 tray exposes 238 square inches, which is a 54% greater area of solution for the air to act upon.

To develop the greatest number of prints possible with a given amount of solution, use a deep tray as nearly the size of the print as is consistent with convenience in handling your work. The saving in developer is worth more than the slight convenience gained by using large trays.

Another and equally great economy is suggested by the glass rod over which the silvered albumen paper, of former days, was drawn to drain the surplus silver solution back into the tray.

By carelessly tossing an 8 x 10 print from the developer into the rinse water, as much as one-half ounce of developer may be carried with the print. Try it for yourself. Lift an 8 x 10 print from the wash water with a quick movement and allow the water to drain into a small graduate. Then estimate how much solution is wasted in developing a gross of prints, if they are handled in the same manner in carrying them from the developer into the rinse water and fixing bath. There is also the additional injury to the fixing bath if the print is not thoroughly rinsed before it is fixed.

The economies suggested are not altogether a matter of saving a few dollars. It is imperative

that the small quantities of developing agents available be made to go as far as possible, otherwise a very serious shortage may result.



COMMERCIAL SKY-LIGHT

The principles involved in the construction of a skylight for commercial purposes such as photographing furniture and other manufactured products are necessarily somewhat different than for a skylight designed especially for a portrait studio.

In commercial work the problem is to secure an even distribution of light and to avoid extreme contrasts. The degree of roundness and brilliancy which is sought in portraiture would be entirely unsatisfactory to the manufacturers of various articles which are sold largely from photographs.

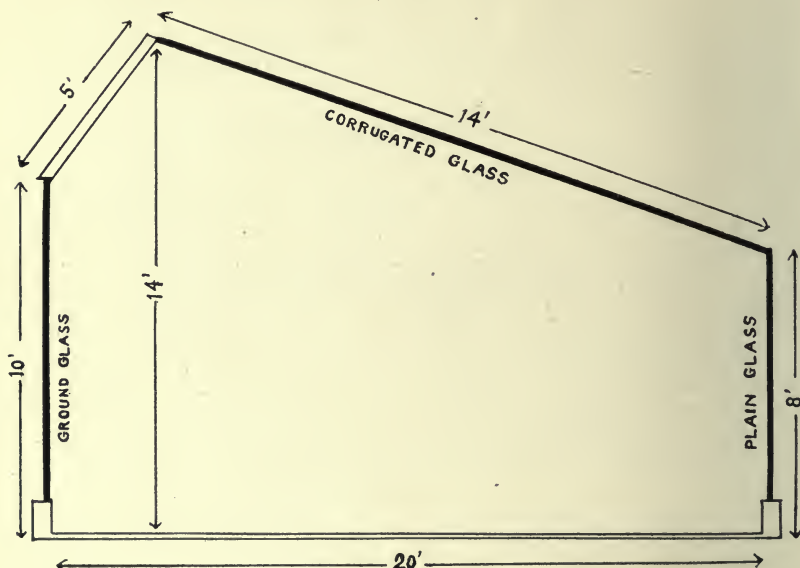
Such photographs not only require brilliancy but also a more even distribution of light to pick up and register every detail ranging from the most extreme highlight to the deepest shadow. This might convey the idea that flatness is wanted, but as such photographs would not be interesting, this is to be avoided.

The problem then is to secure a soft, even illumination and also to preserve brilliancy. To secure uniform illumination, it is almost necessary to have the light come

Your friends can
buy anything you can
give them — except
your photograph.

There's a photographer in your town.

Eastman Kodak Company, Rochester, N. Y.



SKYLIGHT FOR COMMERCIAL STUDIO

from practically all directions at once. However, the illumination must be under perfect control and, even though not apparent to the eye, a little stronger from one direction. In the accompanying diagrams we have illustrated a skylight which is very suitable for the general requirements of the average commercial photographer.

On the north side there is a plain glass side light starting at about one foot from the floor and extending vertically eight feet from the floor. This light for an

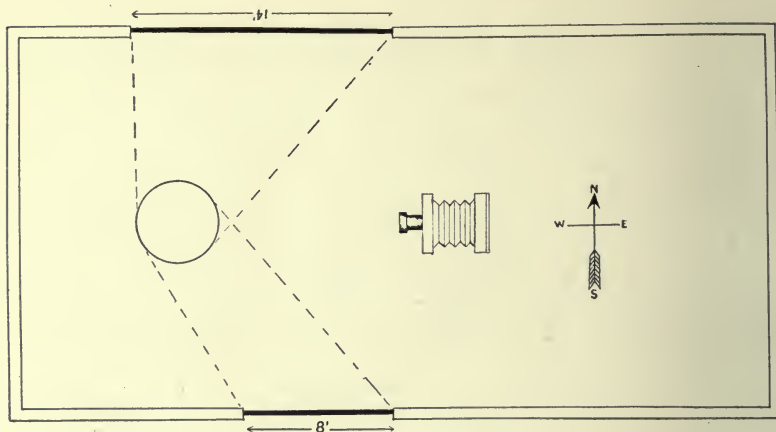
operating room forty feet long should be about fourteen feet wide. Plain glass would be suitable for the north side light as it never receives the direct sunlight. The top light should preferably be built of heavy corrugated glass. It is advisable to have the top light built as flat as practicable and it should extend pretty well across the room. The top light should be built flat enough to bring the extreme height at the peak at about fourteen feet from the floor.

On the south side a smaller



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OPERATING ROOM 20x40

light constructed of ground glass should extend to a height of about ten feet. The width of this south light need not be over eight feet. It is advisable to have the north side and top lights start at about six feet from the west wall, which brings the eastern edge of the light to the middle of the room. The south light should start at about twelve feet from the west wall and should also extend to the middle of the room so that the eastern edges of both the north and south lights are directly opposite.

With lights of this construction and with complete sets of white muslin curtains, it is possible to secure perfect light control and to obtain uniform and evenly illuminated negatives under all conditions of weather. By

drawing the top and south curtains to exclude the sun on bright days, and by using the light wide open on dull days, comparatively uniform exposures may be obtained. A soft light and full timing is an important factor in obtaining negatives of the desired quality in commercial photography.

The plans suggested are suitable for an operating room twenty feet wide by forty feet long. This would be a very suitable size for the average commercial studio. If, however, this amount of space is not available, a room of somewhat smaller dimensions may be successfully used, but in such case the size of the skylight should not be reduced in proportion to the size of the room. It may be made smaller but must have suf-



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ficient size to properly illuminate any object that is to be photographed.



INEXPENSIVE CONVENIENCES

It is possible to do without a Stirring Rod, but the use of one certainly saves time and insures proper mixing of your chemical solutions. The ordinary wooden rod is open to objection, because it soon becomes water-logged and soaked with chemicals. The most efficient is the Thermometer Stirring Rod, which combines the functions of a thermometer and a stirring rod in convenient form. Your stock house sells these at 60 cents each.

For a stirring rod, pure and simple, there's nothing better than the Eastman Hard Rubber Stirring Rod, which will last indefinitely, because it is made of hard rubber, moulded around a core of aluminum—acid-proof and break-proof, as well as non-absorbent. Your stock house sells these at 20 cents each.

Another handy device that will last for years and years is the Eastman Hard Rubber Print Paddle, which is made on the same principle as the Stirring Rod. You can sure enough whittle out a print paddle in a few minutes, but you've got to keep on whittling them out, whereas a paddle of hard rubber does not

become useless through soaking up chemicals, etc. Besides, the shape of the paddle is ideal for separating prints, and your hands need never be put in the Hypo, if you use one of these paddles. Price, 35 cents each, at your dealer's.

It's a good scheme to have on hand a series of Masks for prints of various sizes that will all fit the same frame, but paper masks are hardly durable enough. The thing to use for making up such a series of masks is Eastman Masking Blanks, which may be had at \$2.00 *per dozen* to fit an 8 x 10 frame. They are made of tinted film support, medium weight, and the transparency of the mask makes it a simple matter to secure perfect registration of paper and negative. Of course, you can cut masks of any dimensions you may desire.



REMEMBER

The time and the place for the
Eastman School of Professional Photography.

Toronto—

*St. George's Hall,
February 22, 23 and 24*

Montreal—

*Coronation Hall,
Feb. 29, March 1 and 2*



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OUR ILLUSTRATIONS

Do you want to make portraits like those shown in our illustrations?

They are made by our plate demonstrators—your demonstrators as well, for these men are always at your service.

Do these pictures appeal to you? If so, these demonstrators will be glad to show you how to produce negatives of as good technical quality—negatives with as much roundness and brilliancy as is shown in these few examples of demonstrators' work.

This is the kind of work the greater part of the money spending public demands. It is the kind of work that is being turned out by the majority of successful photographers. And by successful, we mean successful financially.

Some of you may be in business for the mere love of photography—may believe in "art for art's sake," but we find that the average man prefers to make pictures that please the buying public and make him a comfortable living.

In no other profession does the manufacturer do so much to help bring about this result—in no other profession is there such a force of experts commissioned to fulfill this idea of service in so broad a sense.

The man who is calling on

hundreds of different photographers gains a broad knowledge of working methods. This, together with his own ability to secure technical results, gives him an experience that is of value to you, if you choose to make use of it.

He is your demonstrator. Do not hesitate to ask his aid. If he can help you to make work of better quality—work for which you can secure better prices, you will find him more than willing. This is a part of the idea of service we offer the professional photographer.

Even the best of work is subject to criticism. You can find points about these pictures you do not like, but, technically, they are good.

Another photographer can criticize your work, but he may not be in a position to help you. His experience has come from years of work under familiar conditions. Under your skylight with your apparatus, he would probably fail to secure results equal to your own.

The demonstrator must secure results under any and all conditions—and he usually does. He has no precedent to guide, or misguide, so he cannot very well fall into a rut. He is therefore more likely to help others out of it.

You may not need him next time he calls—may be too busy for a demonstration. Tell him

so in a kindly way and he will not bother you. And when you do need him he will be all the more willing to give you his time and help.

The photographer who realizes it is to his interest to keep in close touch with the demonstrators who call on him, is usually found among the most progressive men in the profession. And these men most always credit their success to the help they receive from conventions, the Eastman School and the demonstrators on their territory.



THE NEW SCHOOL

The Eastman School is on the road again after the holiday vacation. Time has been taken to add new equipment, to whip new ideas and working methods into shape and to properly arrange and time demonstrations and lectures so that all of the good things can be crowded into the three days of instruction.

The School is larger than ever before. It has been made over, enlarged and then boiled down to something near its normal size, but it is, for the most part, brand new.

It is more than ever, a school of instruction. Some of the methods which could only be explained in the 1915 School have been improved and are now being demonstrated in a most instruc-

tive manner. This is especially true of commercial work. The negatives of difficult subjects are actually made after they have been prepared by the latest and most approved methods.

The same may be said to apply to the business talks of the School program. Much has been said of business methods and system in a general way, but the present School has a definite system to offer the photographer. It is simple enough for anyone to understand, yet broad enough to take care of the business of most any studio.

It does not require an expensive set of books and it does not require an expert accountant to install it and keep its records in order. It is a means of obtaining a record of all the transactions of a photographic studio, enabling one to determine the receipts, disbursements, expense, costs, profits, etc., for a given time. It keeps the various items separated in such a way that any desired information as to the standing of the business, available assets, accounts payable, etc., may be determined in the least possible time and the simplest manner.

The importance of system in the studio has been preached at most every photographic gathering in the last few years. However, available methods have been too difficult or have been more complicated than the nature



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of the photographer's business required.

The system taught in the 1916 School is as simple as is consistent with good business practice. It has been devised by expert accountants who are familiar with the photographer's requirements. And this one feature is worth a trip to the School. It is a first day feature—don't miss it.

Negative making, while no more important than good business practice, has always held a greater interest for those attending the School. While business method has been strongly featured, practical negative making has by no means been slighted.

The negative making demonstrations will be more interesting than ever before, and they will be different. Aside from the home portrait setting and demonstration in home portraiture, which has been an interesting feature of recent schools, a skylight has been added to the school equipment.

This has been made, as nearly as possible, the counterpart of skylights in the average studio. It will give you a better idea of how to control your light, because it duplicates studio conditions as nearly as can be done with artificial illumination.

In these demonstrations the photographing of babies and children, singly and in groups, will be a feature. Child portraiture has been so successfully practiced

by some photographers that they have come to be known as specialists. The high-chair and woolly rug, that figured in most every baby picture made some years ago, have been discarded by progressive photographers and children are now allowed to be their natural selves. The best methods and accessories used to secure portraits of children under such conditions will be shown in these demonstrations. Subjects will also be selected from the audience and the best method of handling each individual will be shown.

But we can't tell you of all the good things in these pages. You will have to attend the 1916 School and see for yourself. Bring your printer and retoucher and receptionist, for there are new things of interest and value in the work of each of these.

The School is coming to you this year at a much greater operating expense than ever before because of the greater amount of special apparatus necessary for practical demonstration. As a consequence, it will be of more practical value to you. Close up the studio for three days and take advantage of the best and most practical course of instruction the School has ever offered you.



It's a Seed Plate you need.



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TONE CONTROL

Artura paper is exceptional as to quality and the properties of the Artura emulsion which give it this exceptional quality make it necessary to handle the paper, in developing, in a manner slightly different from other papers to secure the full benefit of its tone quality.

The most popular Artura tone is a warm olive black—not a green black—and every photographer who properly handles the paper knows that this tone may be secured without loss of detail or delicacy of gradation and without blocking in the shadows.

To produce the olive-black tone and avoid the greenish-black tone, which is not so desirable, it is necessary to have a knowledge of the action of Bromide of Potassium in the Artura developer.

If an Iris print is developed in the regular Artura developer minus the regular amount of Bromide of Potassium, the result will be a flat print of a bluish color. The development will be rapid and the highlights and white margins will have a veiled or fogged appearance.

Bromide is added to the developer as a restrainer to keep the whites clear while the developer acts upon the exposed silver. Only a sufficient quantity of Bromide to secure this action is included in the formula for the stock solution. The formula for

developing calls for additional Bromide sufficient to give the proper tone under normal working conditions.

But local conditions sometimes make a greater quantity of Bromide necessary, and just here is where the manipulation of Artura differs from other papers. If the water contains an excessive amount of alkali or other chemical impurities which upset the balance of the developer and give a black tone where the olive is desired, add more Bromide. If the first addition gives a green-black tone, add still more Bromide, until with normal exposure the olive-black is secured.

Exposure also has to do with the color of the print, but normal exposures should always be made to secure the best results. The correct exposure for the average negative may be determined by a series of varying exposures, after which there will be but little trouble in judging normal exposure, because of the great latitude of the Artura emulsion.

With correct exposure the important point is to use enough Bromide to pass the black and greenish-black stages and secure the fine olive tone that has made Artura so popular with the portrait photographer. And no more desirable—no more pleasingly brilliant tone quality has ever been secured in a developing-out paper.





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YOUR friends
can buy any-
thing you can give
them—except your
photograph.

Make an appointment to-day.

THE
PYRO STUDIO



No. 222. Price, 50 cents.

THE ONLY CONDITION
We make but one condition
in our offer of cuts for the use of
photographers.

It is obvious that two photogra-
phers in the same town would not
care to use the same cut, and we are
therefore obliged to limit this offer
to one photographer in a town. It
will be a case of first come first

served. The first order from a city
will be promptly filled. Succeeding
orders (if any) will necessarily be
turned down and the remittance, of
course, will be returned. It is also
obvious that we cannot, on account
of the cost of the drawings, furnish
any large variety of cuts at the
nominal prices quoted, and therefore
can offer no substitute cut. Get
your order in *first*. C. K. Co., Ltd.

BULLETIN: THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY FOR 1916



Buffalo, N. Y. Feb. 15, 16, 17

Toronto, Ont. Feb. 22, 23, 24

Montreal, Que. Feb. 29, March 1, 2

Detroit, Mich. March 7, 8, 9

Cincinnati, O. March 14, 15, 16

Chicago, Ill. March 21, 22, 23





Eastman Four-in-One Groupers

*They fill a
big want in a
small space*

Four grouping stools in the place of one—ready in an instant when needed, out of the way when nested.

These stools are especially convenient in arranging groups and should form a part of the equipment of every studio. Made of solid oak, finished in mission style and sold at a price so reasonable that you cannot afford to be without one or two sets.

THE PRICE

Eastman Four-in-One Groupers, per set, \$11.00

Canadian Kodak Co., Limited,

All Dealers'.

Toronto, Canada.

EASTMAN CARD INDEX STUDIO REGISTER



LEDGER ACCOUNT

Mrs. Frank P. Bradlock

May 10	To One Aptex Color	1.00	
June 6	By Cash	2.00	
			24.00

STUDIO REGISTER SYSTEM

Mrs. Frank P. Bradlock

Date	Particulars	Dr.	Cr.	Balance
July 31/10	414 King St., Rochester N.Y.			
Aug 1	Cash	12		
10th	July 24/10			
	July 24/10			
	Aug 1/10			
	(Receiving)			
	(Conversion Negative)			
Sept 4	1000	100		
July 2	1000		100	
Aug 7			15.00	

The only complete and practical card index system for the correct keeping of studio accounts. *Only one card for the complete transaction*, whether cash or credit. The Eastman Studio Register System is the simplest, most practical and most economical system ever devised for the correct keeping of studio accounts. Includes quartered oak Desk Box, quartered oak Transfer Box (holding twelve hundred cards), two full sets of alphabetical guide cards (date guide cards, one full set), monthly guide cards, and appointment guide card, and three hundred special ruled register and ledger account cards.

THE PRICE

Eastman Studio Register System complete, \$6.25

Canadian Kodak Co., Limited,

Toronto, Canada.

All Dealers'.

Authorities agree that negatives of the best printing quality are secured by the use of Pyro as a developing agent.



The chemical in its most convenient form:

Eastman Permanent Crystal Pyro

The clean, clear crystals are easy to handle—do not deteriorate—give off no flying, stain producing dust.

It is one of the Tested Chemicals.

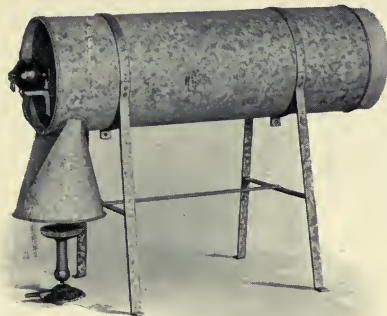
Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

Improved Majestic Print Dryers

Save time, increase the efficiency of employees and insure the delivery of work when promised.



Improved Majestic Print Dryer No. 1

Prints for delivery, unmounted, loose mounted or in folders are properly shaped and bone dry in from 15 to 20 minutes.

The No. 1 Dryer has an 11-inch drying roll wound on a metal core inside of which fits a 7-inch roll. The large roll is for large and the small roll for small prints. The capacity of the two rolls is about 200 average size prints.

The No. 5 Dryer has five rolls, one 11-inch roll in the center and four 6-inch rolls around this. Its capacity is about 600 average size prints.

The No. 1 will dry from 1,600 to 4,000 prints—the No. 5 from 3,000 to 12,000 prints in a day, depending upon the use of extra rolls and the ability to keep them filled.

THE PRICE

Improved Majestic Print Dryer No. 1, complete with drying rolls,	
electric motor, fan, gas heater and stand	\$30.00
Improved Majestic Print Dryer No. 5, complete as above	60.00
Extra Drying Rolls, 11-inch, complete	2.00
“ “ “ 7-inch, “	1.75
“ “ “ 6-inch, “	1.50
Extra Muslin-Faced Blotter, for 11 or 7-inch rolls	1.40
“ “ “ “ 6-inch rolls	1.00

CANADIAN KODAK CO., LIMITED,

All Dealers'.

TORONTO, CANADA.

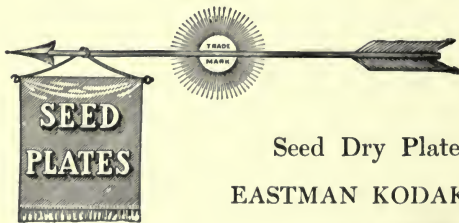
*"Super-speed" best describes
the extreme sensitiveness of the*

SEED GRAFLEX PLATE

It has the approval of Press photographers the country over—is being used by these men who do not recognize the word "failure."

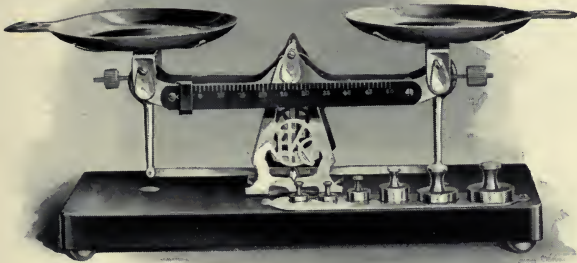
For speed shutter work or ordinary instantaneous exposures under unfavorable conditions of light, the Seed Graflex Plate will always yield the best possible result just as it is recording "scoops" in news pictures every day.

With normal development it yields a perfect scale of gradation, while by prolonged development the degree of contrast desired in Press photography is obtained without fogging.



All Dealers'.

Seed Dry Plate Division,
EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.



Accuracy and convenience combined in the

Eastman Scale

Will weigh from one to fifty grains by simply adjusting a sliding weight on a beam—accurately tested weights from fifty grains to two ounces are used for weighing larger quantities.

All weights are plainly marked in grains as well as ounces or fractions of an ounce avoirdupois. All metal parts are nickered except beam for weighing grains, which is black enameled with white markings. All bearings are of hardened steel and the balance has an extremely sensitive adjustment.

THE PRICE

Eastman Scale \$4.00

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

Any light will cause fog if you allow it sufficient time,
but you can have maximum illumination with
safety by using the

Wratten Dark Room Lamp

—with—

Wratten & Wainwright Safelights

as indicated below for the several kinds of plates, films
and papers.

Series 00—Bright yellow, for use with D. O. P. in general.

Series 0—Bright orange, for use with Bromide Paper,
Lantern Plates, or very fast D. O. P.

Series 1—Orange, for use with plates that are not color
sensitive.

Series 2—For use with extra rapid orthochromatic plates
and films, not sensitive to red.

Series 3—A special dark green, for use with red sensitive
Panchromatic Plates.

Works by indirect, reflected light only and adequate
ventilation is provided to prevent overheating of the
Safelight. Lamps are furnished with any specified Safe-
light, nine feet of cord and adapter attached, but no
bulb. A 16 c. p. carbon, or 25 watt Tungsten Lamp,
is recommended.

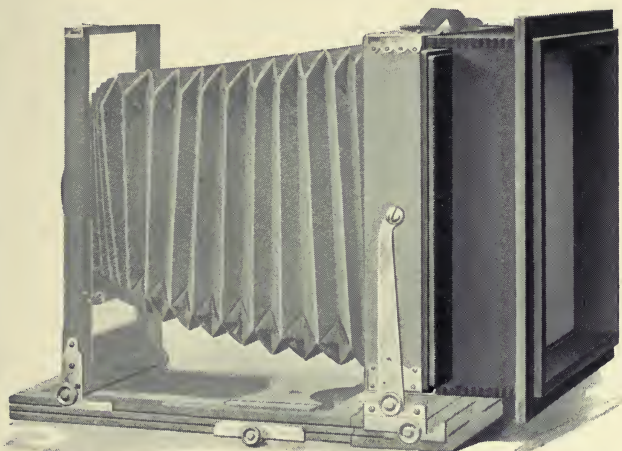
THE PRICE

Wratten Electric Dark Room Lamp, complete with	
any specified Safelight, cord and adapter . . .	\$5.00
W. & W. Safelights, each	1.20

Canadian Kodak Co., Limited,

Toronto, Canada.

*Create a demand for large prints from small negatives—
and get the long profit by making them yourself.*



The R. O. C. Enlarging Back

Readily adapts the ordinary view camera to enlarging with either artificial or daylight.

Made in $6\frac{1}{2} \times 8\frac{1}{2}$ and 8×10 sizes to fit Empire State and Premo View Cameras. Adapters to fit Century, R. O. C. or Eastman View Cameras supplied without extra charge.

With this enlarging back attached to your view camera the rest of the outfit is quite simply made with little trouble or expense.

*"Enlarging for the Professional," an interesting booklet
on enlarging processes, mailed free on request*

Canadian Kodak Co., Limited,

All Dealers'.

Toronto, Canada.

For School and College Pictures

THE VARCO



A College Style Art-proof for
2 x 6 and 3 x 6 Black and White,
Buff and Sepia Prints.
Colors—Swiss Gray and Brown.

The Varco—Specially made for College and School pictures that you want to deliver in Art-proof style. The shades are Swiss Gray and Dark Brown, suitable for any tone of print. Stock is deckled all around with delicate tinted line on flaps. For 2 x 6 and 3 x 6 prints.

SAMPLE MAILED FREE

MANUFACTURED BY

Canadian Card Co., Toronto, Can.

OUR POLICY

Our business was established on a quality basis. It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

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C. K. Co., Ltd.



EASTMAN PORTRAIT FILM NEGATIVE, ARTURA PRINT

*From Eastman
Professional School
Demonstration*



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

ESTABLISHED 1901

ESTABLISHED 1906

VOL. 8

MARCH 1916

No. 1

GETTING EASTER BUSINESS

Next to Christmas and New Year's, Easter offers the greatest opportunity for business getting. Easter is in some ways even a more appropriate occasion for the gift of a photograph, because the Easter gift should carry more of sentiment than actual value—and nothing lends the personal touch of friendship so much as your photograph.

That's the idea that "*There's a photographer in your town*" advertising will convey to several millions of readers of the national magazines in April. The copy is slightly different from what we have used previously, because we have given it a bit of the season's atmosphere by introducing the Easter lilies (see page 7). But it is copy you can use and should use to let it be known that you are the photographer in your town.

You are probably now using the slogan we used in our March

advertising: "*Your friends can buy anything you can give them—except your photograph.*" Continue to use it alternating with this special Easter copy.

We have gone at this Easter advertising in a very forceful manner, using full pages in April *Century*, *Cosmopolitan*, *Harper's*, *Scribner's* and *Everybody's*; also quarter pages in *McClure's*, *Hearst's*, the *Ladies' Home Journal*, *Woman's Home Companion*, *Collier's* and *Saturday Evening Post*.

Even the biggest advertisers would consider this a formidable array of big guns—a preparedness program to meet Easter competition that should make the heart of the most enthusiastic pro-advertiser glad.

What it means to you depends upon what you make it mean. You are going to get a certain amount of business directly or indirectly, due to this advertising. And if you use this Easter copy and use the slogan we gave you

last month—use them in such a way that they will reach everyone in your town—you can expect a much larger share of the benefits of our advertising in addition to your own.

Put yourself in the place of any one of your prospective customers. You read the magazines and you see a good many things advertised that make a direct appeal to you. You also read the daily paper. Now suppose you see the same article that appealed to you in the magazine, advertised for sale by John Smith, whose store is on Main Street.

You will naturally go to John Smith to buy this article rather than hunt for some other merchant who may sell the same thing. And your advertising will connect up with our advertising in exactly this same way.



A NEW GRADE OF AZO

A new grade of Azo, A. A. (carbon) has just been added to the Azo line. This new grade is similar to Grade A but is coated on a stock of paper with a slight cream tint. While a radical difference is not noticeable in the black and white print, the sepia tones on A. A. have an additional warmth that many photographers consider desirable. A. A. Azo is made only in double weight and the one degree of contrast, Hard.



KODAK SAFELIGHT LAMP

Wratten Safelights and Safelight Lamps have introduced a dependable factor in the problem of properly and safely lighting the dark room. The lamps as well as the safelights themselves are constructed on scientific principles and produce a soft indirect light which evenly illuminates the glasses of the safelight.

The Kodak Safelight Lamp, constructed on the same principle as the larger Wratten Lamps, is the latest addition to the series. It will hold any of the 5 x 7 Safelights. Price, \$3.00 complete, with one 5 x 7 safelight and cord. F. O. B. Rochester.

With the Safelight recommended for plates of any given degree of sensitiveness, the prop-



EASTMAN PORTRAIT FILM NEGATIVE, ARTURA PRINT

*From Eastman
Professional School
Demonstration*



er electric bulb and the lamp at the proper distance, one may work with perfect safety and still have a reasonable volume of light for developing plates or loading holders.

Safelights are made in six series as follows:

Series 00.

Yellow light for use with gas-light papers.

Series 0.

A bright orange color suitable for use with Bromide paper and lantern slides.

Series 1.

For use with ordinary, medium and extra rapid plates which are not color sensitive. Consists of yellow and orange coated glass with red paper between.

Series 2.

For use with extra rapid and Orthochromatic plates which are sensitive to green but not red. Consists of yellow and violet colored glass with deep red paper between.

Series 3.

This is the green safelight for use with the red-sensitive Panchromatic plate. It gives a faint illumination which grows quite strong as the eyes become accustomed to it. This safelight consists of yellow and green coated glass with green paper between.

Series 4.

Bright green safelight for use with ordinary plates, for those who are unable to use a red light such as the Series 1. Series 4 is

unsafe for Orthochromatic plates.

5 x 7	Safelights, any series,	\$0.50
8 x 10	“ “ “	1.00
12 x 15	“ “ “	2.00

F. O. B. Rochester.



OUR ILLUSTRATIONS

Our illustrations are from Eastman School negatives and give a very good idea of the class of work that is being made at the school demonstrations.

Eastman Portrait Film is used in these home portrait demonstrations, the negatives being made by artificial light which is used from necessity rather than choice. However, the conditions which exist in the average home are very nearly duplicated and the methods of lighting and handling of subjects are very instructive.

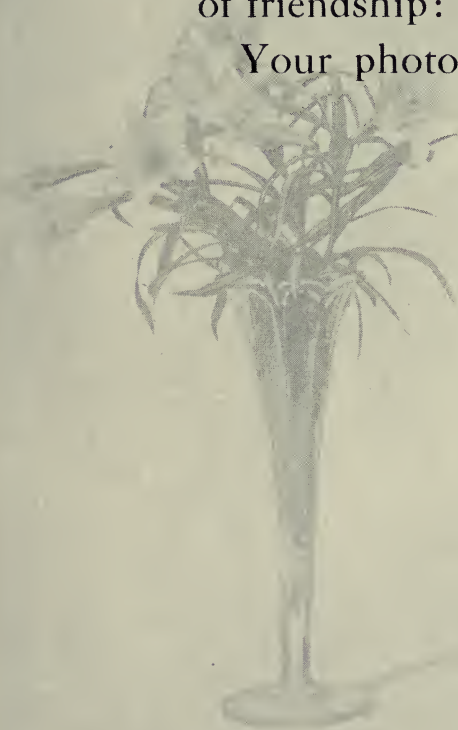
The 1916 School offers more in the way of practical demonstrations than any previous school that has been sent out from Rochester, and the record breaking attendance is proof positive of the interest these demonstrations have created.

Several new features have been added to the portrait demonstrations, including posing and negative making of babies, children and groups of mother and children, wherever it is possible to secure subjects.

In the demonstrations of commercial work the most practical

Let the Easter card
carry the message that
lends the personal touch
of friendship:

Your photograph.



There's a photographer in your town.
Eastman Kodak Co., Rochester, N. Y.

and convenient apparatus is shown, explained and used, the most difficult subjects are prepared for photographing and the various new methods are shown and explained. Actual negatives are made, using the most approved methods for lighting difficult subjects, the resulting negatives being shown.

In the business lectures and demonstrations a practical business system for the photographer is a prominent feature. We think it is a most valuable offering. But there are valuable suggestions and ideas in every line of work, and it is decidedly worth your while to attend every lecture and demonstration.

Watch the dates and be prepared to take advantage of the school when it is in your locality.



Safelights

As the name implies, Safelights used in connection with Safelight Lamps, make your dark room a safe place to handle and develop plates.

*There's a Safelight that's safe
for your particular use.*

SIMPLE BOOKKEEPING FOR THE STUDIO

There's such a thing as too much system or too little system.

Too much system is like over-eating—it slows up your machinery, while just the right amount has a stimulating effect.

The Eastman Studio System which is being exploited by the 1916 Eastman School of Professional Photography, is entirely new and has been devised by accountants who are thoroughly familiar with the business of the photographer.

It is a system that may be applied to the largest or smallest studio and found entirely practical with either. And while it is a simple system—one that is readily understood and requires the minimum of time and attention—it is remarkably efficient, because it fits a particular purpose and eliminates all unnecessary red tape.

Bookkeeping should never be complicated unless a business itself is complicated, and the business of the photographer is not. As a consequence, it has been found that the business of the studio can best be taken care of with a cash book and register cards, the other items of the Eastman system being incidental to these two.

The register card if properly filled out at the time an order is taken, gives all the information



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regarding the order and remains in the card index box which acts as a ledger. This box contains all unpaid customer accounts. The cards are placed in a transfer box when the account is paid and become a record of the negatives and orders.

Cash receipts and cash payments of any nature whatever, are recorded in the Cash Book, which is balanced each month. Fourteen separate columns, provided for receipts and payments, classify the items in such a clear manner that the condition of the business may readily be determined by making a statement according to instructions and forms which are provided in the back of the book. There are also pages for a monthly summary which makes it possible to compare the business for any month or period with the same month or period of a previous year.

The system includes a Shop Ticket which when properly filled out from the order on the Register Card, gives all necessary information for the operator, retoucher and printer and remains with the particular order until the work is completed.

There is also a Follow-Up Card to be used by the receptionist to keep track of prospective customers who have made inquiry regarding work. The idea is to follow up these inquiries with personal letters.

In all, the system is quite complete and is fully explained in a booklet showing examples of pages from the Cash Book covering a month's business, a summary of several months' business, as well as a statement showing the condition of the business and the net income or profit for a given time. This booklet of instructions is supplied with the Cash Books, which with the other items, may be had from your dealer.

THE PRICE

Eastman Studio Register System, complete with Transfer Box and cards	\$5.00
Eastman Studio Cash Book with complete instructions	4.00
Eastman Studio Shop Tickets, 50 tickets to a pad, per 100 . . . . .	.25
Per 1000	2.00
Eastman Follow-Up Cards, per 100 . . . . .	.60
Per 1000	5.00

Above prices F. O. B. Rochester.



The best developer is the one that gives you negatives of the best printing quality.

Authorities agree that there is nothing equal to Pyro.

The chemical in its most convenient form:

Eastman Permanent Crystal Pyro

It is one of the Tested Chemicals.



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A SUBSTITUTE FOR ELON OR METOL DEVELOPERS

Elon, Roylon, Metol and similar coal tar developing agents are derived from phenol (carbolic acid) which forms a large constituent of medium tar oil. But phenol itself and other phenol substances occurring in medium tar oil form also the raw material for the manufacture of explosives.

Enough said—Elon, Metol and similar developing agents are unobtainable in the open market at the present time. And there is little hope for the immediate future.

The logical thing to do then is to conserve any small reserve of such chemicals and consider seriously the use, in every way possible, of developing agents which are independent of this source of supply.

The two of these developing agents which offer the most satisfactory solution of the present problem are Pyrogallie Acid and Hydrochinon. In chemical composition the two are closely allied as Pyrogallie Acid is trihydroxybenzine while Hydrochinon is dihydroxybenzine.

Pyro has been recognized for years as the standard developer for plates and films and we do not believe the printing quality of the pyro developed negative

has ever been fully equaled by negatives developed by coal tar developers.

While many photographers have found it convenient to use the same chemicals for compounding developers for plates and papers, it will not be a hardship to go back to pyro, and if results are improved—so much the better.

Hydrochinon is being manufactured in the United States in increasing quantities and it is reasonably certain that the supply will keep pace with the demand. With the proper proportions of sodas and bromide, Hydrochinon makes an excellent developer for all developing-out papers, so the shortage of coal tar developers will not work any real hardship on photographers of this continent.

The following Hydrochinon developer has been found to be very satisfactory:

FOR ARTURA IRIS:

Water	30 ozs.
Hydrochinon	100 grains
C. K. Co. Sulphite of Soda	200 grains
C. K. Co. Carbonate of Soda	3½ ozs.
Dissolve chemicals in the order named.	

Add one drop of a *Saturated Solution* of Bromide of Potassium to each ounce of the above developer.

For Azo, Artura Carbon Black, Carbon Green Non-Curling and Chloride; also for Velox or Eastman Bromide Papers, used for commercial work or amateur finishing, the same developer



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may be used with the following exception:

Add one drop of a *Saturated Solution* of Bromide of Potassium to each 3 ounces of developer.

In using the above developer for Artura or Velox, the image shows more like an overtimed print at the beginning of development, but will clear and build up as development goes on.

Use at a temperature of 68 to 70 degrees.



[While the article below contains some suggestions that are not strictly applicable to Canadian conditions, it nevertheless offers valuable hints to photographers as to the lines along which profitable business may be sought and developed. Commercial Photography is attracting more and more attention because of its varied possibilities, and the prudent photographer will steadily strive to make known the possibilities of his craft. The extract is from the British Journal of Photography.]

BUSINESS IN THE FUTURE

Never has there been a time in the history of the British Empire when it has been so difficult to forecast the future of any section of our commerce or industries. No true Briton will admit the possibility of defeat or even of a peace which would leave the enemy in a position to cause injury to the Allied peoples for many a day; but there is one thing that photographers must

not look forward to, and that is the maintenance of the boom in portrait work which started with the commencement of hostilities, and has continued up to the present. There is no doubt that the portrait has assumed greater importance in most British homes than it has ever done before, and that for many a day the result of the war will be orders for pictures to commemorate gallant men who have either perished gloriously or have lived to receive the reward of their valour. But this is but one side of the question. We have to look forward to a generally reduced standard of expenditure on the part of private customers after the cessation of hostilities, when the scattering of the nation's saving has ended and the process of rebuilding has commenced. Then must the photographer strive to share in the great effort which will be made to extend British commerce into regions hitherto supplied by the Central Powers, and to furnish our own people with goods for which we have hitherto been dependent on those who are now our enemies and with whom we shall be loth to deal again. One way in which we can participate is by furnishing matter for advertisements, not, of course, literary matter, which the professional "adsmith" provides, but illustrations which will give an accurate and at the same time attractive idea of the goods offered. In all large towns

there are firms which specialize in this class of work, and naturally they will retain their old customers and obtain new ones; but there are many comparatively small towns, which have large works situated near them, where it would be to the mutual advantage of photographer and manufacturer to come together. It is very convenient for the latter to be able to have a machine, a dinner service, or a suite of furniture photographed at an hour's notice, or in the short period available between completion and dispatch, and it is to the photographer's benefit to secure orders that call for no expensive mounts and no risk of resittings; but the work must be done in first-class style and finished ready for the engraver. If this can be done, there will be little difficulty in obtaining a fair price, although it must not be forgotten that all charges must be calculated upon a business basis, and not with any idea of charging a fee for artistic work. The photographer must, in fact, do as the manufacturer does—carefully work out the cost of production, and, after allowing for all establishment charges, add a reasonable margin of profit.

The first thing to be done is to prepare some well-finished sample prints, both mounted for display in the showroom and finished ready for the process engraver. Those who do not know the engraver's requirements should

study good catalogues, and they will see that what is wanted is a clear image carefully blocked out, and with all the details clearly outlined, any lettering being very distinctly shown, while shadows are added where necessary with an air-brush. As a rule 12 x 10 is the favorite size for such work, but a smaller sized camera may be used, and enlargements made from the selected negatives. It is, however, better to make the 12 x 10 negatives direct if possible.

In addition to the prints supplied for process work, real photographic prints should be placed before the manufacturer, and every effort made to convince him of their "pulling" powers. Large orders may be obtained in this way, and if the photographer's own printing accommodation be limited, there are several firms who will turn him out from 500 to 500,000 in any size and of uniform quality.

Many other side lines suggest themselves, such as the copying of documents, drawings, etc., advertising pictures on a large scale for house agents, real photographic postcards for advertising purposes, and the like. Nor must it be forgotten that there is a good market for original studies for advertising purposes, such subjects as the "Skipper," the couple snugly ensconced in a Great Northern Railway carriage, and many others serving as examples



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of what is required in this direction. Special aptitude is required for some of the work we have mentioned, but for the bulk of it manipulative skill and business habits will bring in a satisfactory return, which will go far to reduce the falling off in revenue due to war conditions. Clean, bright work promptly delivered should be the aim of all who wish to have a share in commercial photography, and if this can be provided orders will not be slow in coming.

B. J.



A METABISULPHITE SUBSTITUTE

Potassium Metabisulphite is a rather scarce article just now, but it has come to be looked upon by the photographer as almost a necessity. Its action as a preservative for Pyro in the developer for plates and as a preventive of blisters in the fixing bath for Bromide papers is such that a substitute which produces the same effect will be welcomed.

We are glad to state that the action of Sodium Bisulphite, which may readily be secured, is identical with that of Metabisulphite and may be substituted, part for part, in all our formulas specifying Metabisulphite of Potassium.

You can secure Sodium Bisulphite from your dealer.



PHOTOGRAPHY INVALUABLE AS AID TO SALESMANSHIP

The following excerpts from an article recently published in the *Detroit Press* give a very good idea of the importance the manufacturer attaches to the photograph as a sales force.

Good commercial photographs are now in demand in practically every branch of the manufacturing industry. And the better they are, the greater is the demand for them.

"DEVELOPMENT OF THE ART OF COMMERCIAL PHOTOGRAPHY RESULTS IN FINE WORK, MUCH OF WHICH IS THE BACKBONE OF ADVERTISING CAMPAIGNS.

This is the era of salesmanship and many things enter into this. The cleverness of the man who is doing the selling is always important, but it is backed up by advertising, and one of the strong points in advertising is photography. It has been demonstrated to the satisfaction of all who advertise in any form that pictures attract as quickly if not quicker than words. The advertising columns of the periodicals which are printed on the finest paper are filled with half tones, and their vogue makes commercial photography a necessity.

The catalogues issued by Detroit manufacturers reflect the excellence of the work done at the local studios. The difference between the stove works booklet of twenty years ago and now makes the change very plain. The plates made from photographs in these days print pictures which stand out and clearly show just what the manufacturer wants to impress upon the people.



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Seed catalogues show some wonderful reproductions of photographs of growing things, so defining the flower, vine or vegetable that a person is able to select just what he wants, reinforced by the descriptive matter.

INFLUENCE OF THE AUTOMOBILE

In the development of commercial photography in Detroit, the automobile industry has played a leading part.

There is no industry which advertises as generally and with such telling effect as the automobile. The men in charge of this department call for the best there is in photography to strengthen their remarks in type. They have found the combination efficient.

'In fact,' said one of the advertising managers of a going automobile concern, 'I do not know what we would do without photographs. We have come to rely upon them in our announcements, and the better the photograph the bigger part it plays in salesmanship, which, by the way, is the bull's eye of the target.'

GREAT HELP TO BUSINESS

There is no business that commercial photography will not help. Take a real estate firm for instance. A man drops in and says he would like to buy a home for about \$7,000 in a certain locality. The dealer tells him what he has and if he is right up to date he accompanies his argument with photographs of the various houses. These are looked over, the interiors explained, maybe there are views of them as well, and the man is more apt to make a choice than if he had to make the trip to all the various houses with only an indistinct idea of how they look.

Manufacturers and business men, who have not gone in for commercial photography to any great extent,

will find it an invaluable aid to the selling end of their establishments."



THE ROYAL LINE OF PLATES

Royal Plates, made in Canada, afford the Canadian photographer a fairly complete range for general purposes.

First is the Royal, Special Extra Rapid, a straight plate of high speed with abundance of latitude, which has given uniform satisfaction in portraiture and the simpler forms of commercial work. We have spared no pains to maintain the quality, and today Royal S. E. R. is the mainstay of many photographers who have used them for years.

Next comes Royal Polychrome, a high-class orthochromatic plate, possessing speed with its color sensitive qualities. Polychrome is the favorite of quite a number of leading commercial workers, who find that it takes second place to none but a panchromatic, where color separation is involved. With a K2 or K3 filter, polychromes discriminate adequately between the colors that prevail in the general run of commercial work, but of course it is to be remembered that they are not panchromatic. Polychromes have also won a name for themselves in portraiture, under artificial or yellow lights, where their color sensitiveness has proved its value.

Royal Process Plates are invaluable for making copies of old photographs, where heavy stain does not exist, as well as in photographing printed matter and black and white subjects, where contrast and clearness are of the first importance.

The Royal line also affords plates for the lanternist. The Royal L. S. emulsion yields transparencies of beautiful brilliance and clearness, with a fineness of grain that will meet all requirements.



FOR THE SPECIALIST

It often happens that a picture which seems just ordinary in black and white, assumes an added charm when reproduced in another color, and this is especially true of landscapes and other outdoor commercial photography. To such pictures a wonderfully realistic value can be given by using Artura Carbon Green, which produces rich Carbon effects in close harmony with natural coloring, by a straight ahead process of single development. Carbon Green is best printed by daylight, and care should be taken to use developer of proper strength.

Carbon Green is especially useful to the man who makes a specialty of high-grade photographic views and post cards, for the realistic tones will lift his pictures away above the level of

the average work, and the public is always willing to pay the price for preeminent quality.

To landscapes, river and lake views, mountain scenery and sunset pictures, Carbon Green imparts a richness that makes its use worth while.



CLEAN LENSES

When you are puzzled to explain the under-exposure of a negative made under normal conditions, on a plate with whose working you are familiar, don't be too quick to lay the blame on the plate, but rather look after your lens, for it is more likely that your lens is playing you false than that the plate has lost its customary speed. You know that dust will always find its way into the frame-work and bellows of your camera, and must be cleaned out if you would avoid dust spots on your negatives, but it is a fact that some of that dust lodges on the lens surface and should be cleaned off regularly. It often happens that lenses become coated with a sort of scum, formed of dust and moisture that has condensed on the lens. Scum of this kind is the cause of much trouble in the way of under-exposure, particularly in studios where there's a great variation between the temperature during working hours and the temperature during the rest of the day.

MAKE YOUR
Easter greeting
a personal one—an
appreciated one.
Send your portrait.



*Your friends can buy anything you can give
them—except your photograph.*

THE PYRO STUDIO

No. 223. Price, 50 cents.

THE ONLY CONDITION
We make but one condition
in our offer of cuts for the use of
photographers.

It is obvious that two photogra-
phers in the same town would not
care to use the same cut, and we are
therefore obliged to limit this offer
to one photographer in a town. It
will be a case of first come first

served. The first order from a city
will be promptly filled. Succeeding
orders (if any) will necessarily be
turned down and the remittance, of
course, will be returned. It is also
obvious that we cannot, on account
of the cost of the drawings, furnish
any large variety of cuts at the
nominal prices quoted, and therefore
can offer no substitute cut. Get
your order in *first*. C.K.Co., Ltd.

BULLETIN: THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY FOR 1916



Detroit, Mich. March 7, 8, 9

Cincinnati, O. March 14, 15, 16

Chicago, Ill. March 21, 22, 23

Indianapolis, Ind. March 28, 29, 30

St. Louis, Mo. April 4, 5, 6

Kansas City, Mo. April 11, 12, 13





Eastman Four-in-One Groupers

*They fill a
big want in a
small space*

Four grouping stools in the place of one—ready in an instant when needed, out of the way when nested.

These stools are especially convenient in arranging groups and should form a part of the equipment of every studio. Made of solid oak, finished in mission style and sold at a price so reasonable that you cannot afford to be without one or two sets.

Write your stock house for prices.

Canadian Kodak Co., Limited,

Toronto, Canada.

All Dealers'.



Eastman Studio Reflector

*The appearance
as well as the
utility of
studio apparatus
counts.*

The Eastman Studio Reflector is not only a practical piece of working apparatus but is substantial and good looking as well. The reflector consists of two swinging screens, each 24 x 26 inches, mounted in a strong iron frame. The screens are black on one side and white on the other and may be swung at any angle and securely locked. The frame is on casters, stands six feet high and is handsomely finished in japanned copper.

Write your dealer for prices.

Canadian Kodak Co., Limited,

All Dealers'.

Toronto, Canada.

Pyro is the *best* developer for Plates or Portrait Films—it is also, at present, by far the most economical developer.

Get acquainted with this chemical in its most convenient form



Eastman Permanent Crystal Pyro

It is clean to handle—gives off no flying particles of dust—yields negatives of the most perfect printing quality.

*Specify Eastman Permanent Crystal Pyro
in your next order.*

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

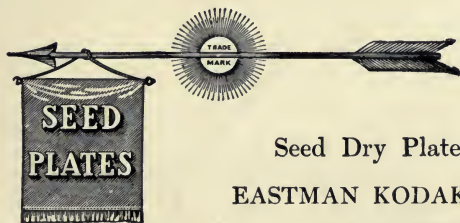
*"Super-speed" best describes
the extreme sensitiveness of the*

SEED GRAFLEX PLATE

It has the approval of Press photographers the country over—is being used by these men who do not recognize the word "failure."

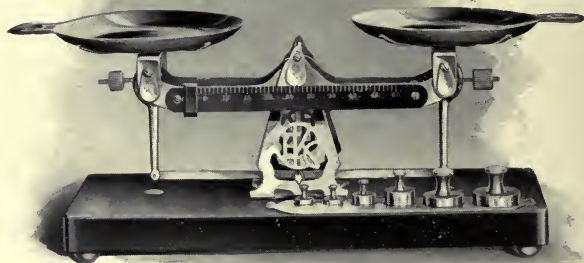
For speed shutter work or ordinary instantaneous exposures under unfavorable conditions of light, the Seed Graflex Plate will always yield the best possible result just as it is recording "scoops" in news pictures every day.

With normal development it yields a perfect scale of gradation, while by prolonged development the degree of contrast desired in Press photography is obtained without fogging.



All Dealers'.

Seed Dry Plate Division,
EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.



Accuracy and convenience combined in the

Eastman Scale

Will weigh from one to fifty grains by simply adjusting a sliding weight on a beam—accurately tested weights from fifty grains to two ounces are used for weighing larger quantities.

All weights are plainly marked in grains as well as ounces or fractions of an ounce avoirdupois. All metal parts are nickered except beam for weighing grains, which is black enameled with white markings. All bearings are of hardened steel and the balance has an extremely sensitive adjustment.

THE PRICE

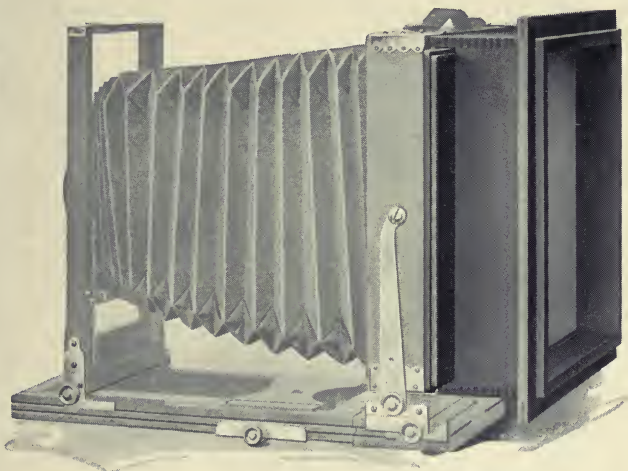
Eastman Scale \$4.00

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

*Create a demand for large prints from small negatives—
and get the long profit by making them yourself.*



The R. O. C. Enlarging Back

Readily adapts the ordinary view camera to enlarging with either artificial or daylight.

Made in $6\frac{1}{2} \times 8\frac{1}{2}$ and 8×10 sizes to fit Empire State and Premo View Cameras. Adapters to fit Century, R. O. C. or Eastman View Cameras supplied without extra charge.

With this enlarging back attached to your view camera the rest of the outfit is quite simply made with little trouble or expense.

*"Enlarging for the Professional," an interesting booklet
on enlarging processes, mailed free on request*

Canadian Kodak Co., Limited,

All Dealers'.

Toronto, Canada.

SEE THIS NEW ONE—

The Traymore Style



A "Corner"

Holder Style

for 3 x 6 and 4 x 6

Double Weight Prints.

Colors:

White Insert, Grey Cover—

Sepia Buff Insert,

Golden Brown Cover—

Dark Brown Insert,

Dark Brown Cover.

The Traymore, a new design for slipped in corner prints, which shows all of the print and makes it look larger and brings the price easier. A strip of cardboard is inserted under the raised embossed corners which assures easy mounting. The cover is extra weight with cloth finish effect and a neat embossed design on smaller flap. A very attractive folder.

SAMPLE MAILED FREE

MANUFACTURED BY

Canadian Card Co., Toronto, Can.

OUR POLICY

Our business was established on a quality basis.

It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

Our theory is that we can best serve ourselves by supplying our customers the best goods. Our acts have made this Theory a Policy, for we have not merely the desire to make the best goods but the means of converting that desire into a Reality.

In thirty years in the photographic business there have been several revolutionary changes. Doubtless there will be many more. Whatever they may be our Policy shall be to furnish (without following every mere will-o'-the-wisp) the very best of those goods which painstaking testing shall prove to be of benefit to our customers in the Simplification of Photographic Processes and the Advancement of the Art.

C. K. Co., LTD.



FROM A SEED ORTHOCHROMATIC NEGATIVE

By C. E. Arnold
Dallas, Texas



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

ESTABLISHED 1901

ESTABLISHED 1906

VOL. 8

APRIL 1916

No. 2

THE THIRTY-SIXTH ANNUAL CONVENTION, PHOTOGRAPHERS' ASSOCIATION OF AMERICA

WIGMORE COLISEUM, CLEVELAND, O.—THE WEEK OF JULY 24TH.

This will be a practical convention.

There seems to be a general demand from photographers in all sections of the country for information and suggestions showing how to make the business more successful from a financial standpoint. In response to this appeal, the Executive Board of the P. A. of A. decided to make the program of the Cleveland Convention full of business from beginning to end.

It is an acknowledged fact that the first requisite of a successful business is service. Service means satisfaction to the patron in every particular. So then we must first help the photographer to make better pictures. With this purpose in view, there will be the exhibit of pictures for which every member of the Association is not only

invited but expected to send prints.

The exhibits will be judged and rated by three competent judges (selected by a postal vote of the membership). Rating cards with criticisms will be mailed to each exhibitor after the Convention.

Professor Edward Lake, Instructor of Art at the University of Illinois, will lecture on "Art Principles as Applied to Photography." Those who heard Professor Lake last year will remember that he gave a most comprehensive and instructive talk. His message this year will be even more helpful than the one he gave at Indianapolis.

Mr. L. B. Jones of the Eastman Kodak Company will talk on "Studio Advertising," dwelling particularly on the application of the broad principles of adver-

tising, to the problem of studio publicity.

Mr. Tim Thrift of the Multi-graph Company will give us some timely suggestions in his lecture on "Direct by Mail Advertising."

Mr. C. H. Claudy, the well-known writer and lecturer on subjects interesting to photographers, will use for his subject, "The Photographer as a Business Man."

Mr. Anderson Pace of the Produce Terminal Exchange, Chicago, Illinois, will talk on "Personality in Business."

The commercial photographers and all portrait workers who do commercial business, will be given special attention this year. Mr. W. H. Bass of Indianapolis, one of the most successful commercial photographers in the country, will talk on "Building a Business." This lecture is more particularly for the commercial men.

Then there will be a Query Box and symposium led by "Billy Sunday" Agler. Those who have had the pleasure of hearing Mr. Agler preside at a meeting of this kind, know it will be lively, interesting and instructive. If you are one of the timid ones who cannot talk in public you may make use of this opportunity, not only to secure information, but also to pass along ideas. If you cannot tell the story yourself, write it, and put it in the box. The Executive Board wants this feature to be one of the most

instructive and helpful numbers of the program.

The formal demonstrations will be by Miss Pearl Grace Loehr of New York City and Mr. Edward H. Weston of Tropico, Cal. Miss Loehr and her work are so well known that she hardly needs an introduction. She, with her regular assistant, will show us how they make the beautiful home portraits which have made her work so popular.

Mr. Weston specializes in pictorial portraiture. While he is but a young man, his work has won honors and admiration both here and abroad. I am sure our members will be glad of the opportunity of seeing Mr. Weston's work.

You have all admired the beautiful pictures of ladies and children made in the gardens and on the lawns by Mr. Clifford Norton. Mr. Norton has kindly consented to make some sittings in one of the parks of Cleveland one afternoon during the Convention. One photographer told me that he considered this one demonstration worth all it would cost him to attend the Convention.

Mr. Heiser, one of the successful commercial photographers, will give a demonstration of how he handles objects that are particularly difficult to photograph. This demonstration will be particularly instructive to the commercial men, but of interest to all.



FROM A SEED ORTHOCHROMATIC NEGATIVE

By C. E. Arnold
Dallas, Texas



Then we are to spend just one hour each morning under the light with three or four of the best known and most successful camera men. Each man will spend 15 or 20 minutes showing some stunt that he has found helpful in his every day negative making. Their names will be announced later.

An expert background worker and colorist will be kept busy working in backgrounds on negatives and prints. This work will be done both by hand and with the air brush. The demonstration will be informal and members are expected to ask questions and learn all they can.

Receptionists will be on hand to show you how to sell pictures, how to show proofs, increase orders and how to get from every sitting you make, as large an order as it should produce.

The manufacturers and dealers have never had such facilities for making an impressive show as they have at the Coliseum. Here are 65,000 square feet of floor space, all on one floor. The entrance is directly in the center of the building, so there will be no choice of space. The manufacturers' and dealers' show will undoubtedly be the best one ever shown at a photographers' convention. This will be a splendid opportunity for you to see the newest things in photography and to purchase your supplies for fall and winter business.

The social features will not be forgotten. Among other entertainments planned, the manufacturers and dealers, who entertain us so royally each year, are going to take us to Cedar Point for a day's outing. Cedar Point, "The Atlantic City of the West," is about four hours from Cleveland by boat or one and a half hours by rail. It is proposed to take us to the Point in the morning, spend the afternoon there and return in the evening. Can you imagine a more delightful trip for a July day than this?

This is the outline of what your Executive Board has planned. More detailed information will follow. If this is a program that appeals to you, get busy on your picture exhibit, begin to save your dimes and arrange to be in Cleveland from July 24th to 29th, inclusive. We want to see you there. L. A. DOZER,
Bucyrus, Ohio, President.
March 3, 1916.



You have positive assurance if the print is on

ARTURA

Every quality of the negative is reproduced perfectly.



FROM A SEED ORTHOCHROMATIC NEGATIVE

By C. E. Arnold
Dallas, Texas



OUR ILLUSTRATIONS

We had intended illustrating this number of *STUDIO LIGHT* with pictures by a man who has always been an exclusive commercial photographer. But now we learn that Mr. C. E. Arnold, the author of our illustrations, has also taken up portraiture and has opened one of the finest portrait and commercial studios in Texas on the fourteenth floor of the Southwestern Life Building, Dallas.

But that's the way they do things in Texas. A thing is never so big but what it can be bigger.

Mr. Arnold has a reputation for excellent commercial work, and while he may make an equal success in portraiture, we feel that our readers will be more interested in seeing our entire space devoted to examples of his commercial work.

It would be interesting to know the exact methods used—the exposure, etc., for each subject shown—but this would be of little real value because parallel cases would be hard to find and equally hard to recognize when they were found.

However, there are some very interesting and instructive things about these pictures that are worth studying. First of all, Mr. Arnold uses nothing but Seed Ortho and Non-Halation Ortho Plates for all his work.

This accounts for the excellent rendering of tone values he has so cleverly secured in his most difficult interior subjects. Carpets, floors, wall coverings, linens, silverware, woodwork, in fact, everything entering into the picture is harmoniously blended without a harsh or discordant note.

While Mr. Arnold gives his working material full credit, we do not minimize his skill in securing good light effects, correct exposures, and in giving proper chemical treatment to the exposed plate. He is an expert worker in his line and well deserves the reputation and excellent business which his work has brought him.

Point of view and good arrangement are also interesting points in these pictures. While a room in itself may be interesting, a glimpse of what lies beyond tells a more complete story—sort of locates you with regard to the rest of the house and adds to the main point of interest.

As to arrangement, it isn't necessary to photograph all the furniture in a room just because it is there. In fact, it is necessary to omit such pieces as will come too near the camera and appear distorted or have the legs chopped off, and, of course, they should not be placed in a part of the picture where they do not belong. Omit everything which does not fit into the natural ar-



FROM A SEED ORTHOCHROMATIC NEGATIVE

By C. E. Arnold
Dallas, Texas



rangement of the room, as Mr. Arnold has done in his interiors, and the result will be most pleasing.

There must be contrasts in every picture, and in most of our illustrations the windows have given the highlights necessary to contrast with the surroundings. The windows naturally give the strongest points of light, but the contrast should not be overdone. In some of our illustrations there is an intimation of objects out of doors, seen through the windows, which adds materially to the effectiveness of the interior. The illustration on page 5 has a pleasing note of contrast in the small wall lights which were lighted for at least a part of the exposure.

It is not possible to use long focus lenses on all interiors, but the effect is much improved when the longest focus possible is used for each subject. This makes a set of convertible lenses almost a necessity if the most pleasing results are to be secured by the commercial worker.

It is hardly necessary to say that such work is profitable. Mr. Arnold has been very successful, as have many other workers along similar lines. Such work is not a matter of theory but of continual practice. You must encounter your problems and overcome them day by day until finally you have a fund of knowledge and a record of accomplish-

ment that marks you as a successful commercial photographer.



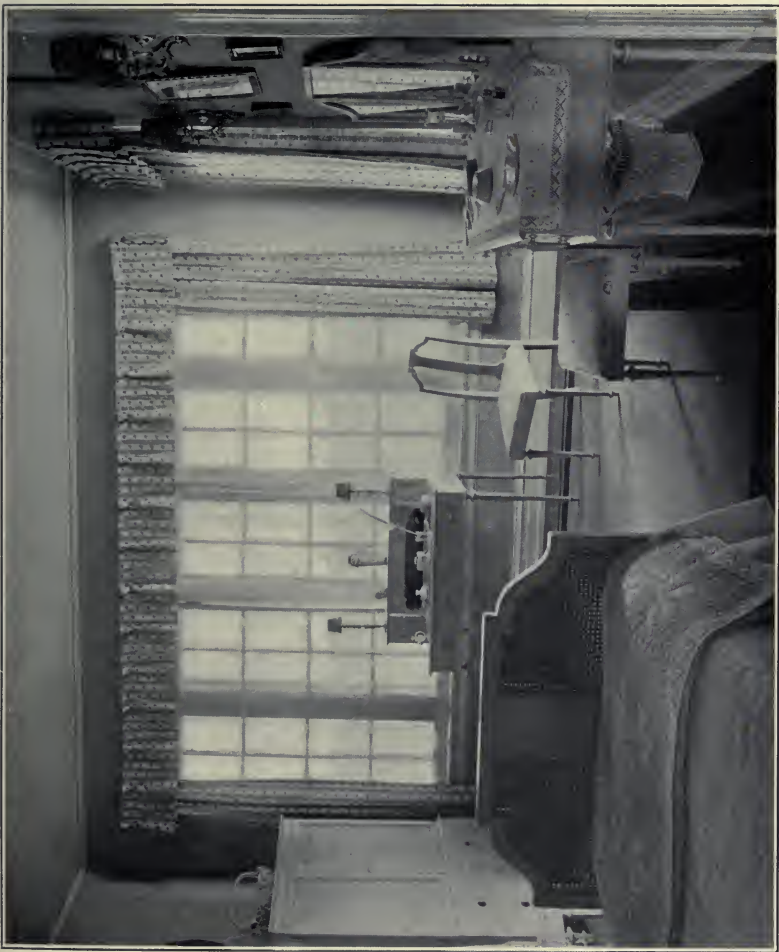
EASTMAN BROMIDE FABRIC No. 1

There is a certain demand for any novelty—anything that is odd or different. For this reason papers are often made to imitate cloth and cloth to imitate leather and leather to imitate finer and more expensive material, but at best they are imitations—they only represent something which they are not.

There have been few such imitations in photographic papers because the surface which gave the odd effect also destroyed much of the effectiveness of the photograph. But it is not necessary to imitate when the genuine article answers the purpose better.

We have found a fabric perfect enough to permit its being coated with a photographic emulsion. It makes an ideal medium for certain kinds of photographic work because the material is such that it will last almost indefinitely.

We are placing this fabric on the market under the name: Eastman Bromide Fabric No. 1. It is of a fine texture and is practically free from imperfections in weaving. It has approximately the same body and weight as a paper and should not be



FROM A SEED ORTHOCHROMATIC NEGATIVE

By C. E. Arnold
Dallas, Texas



confused with the slimsy sensitised photographic cloth which is not coated with an emulsion.

Eastman Bromide Fabric has a beautiful surface and texture and will be found valuable for many classes of commercial work. It is also especially suited for portrait prints which are to be colored.

The canvas effect of an oil colored portrait is very desirable and when it is not necessary to work for effect alone—when the print is actually made on a fine grade of fabric—the genuineness of the result, the pleasing texture the fabric imparts to the photograph itself, is convincing proof of its quality and worth.

WHY A SLACK SEASON?

Why there should be a slack season in professional photography nobody knows, but it is certain that the idea of this recurrent period of stagnation has taken firm hold of a large number of photographers, who wait, grumbling but inactive, until the public wakes up and asks again for their services.

There are in the photographic profession men who have come into it, not as photographers, but as business men; and it is noteworthy that complaints of bad trade come very seldom from photographers in this class. On the other hand, there are many in the profession who, although

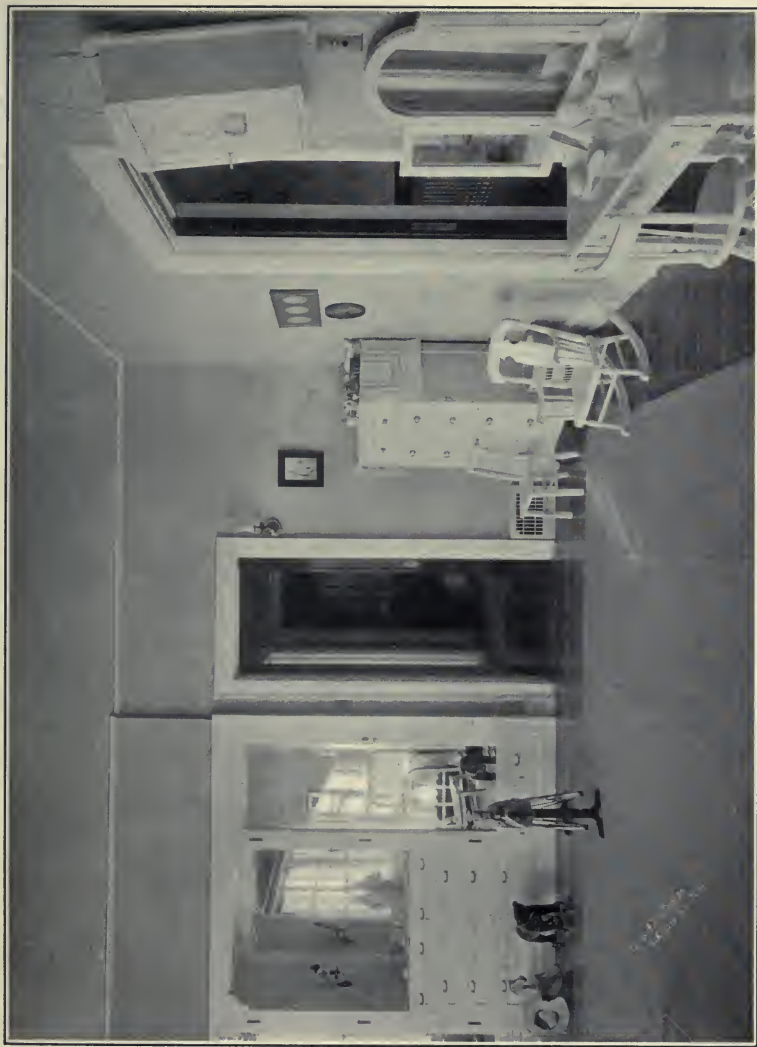
Eastman Bromide Fabric will be found excellent for many kinds of commercial prints that have previously been mounted on cloth for binding. In fact, it can be used for most any work which does not require a glossy surface. And where it dispenses with mounting on cloth it will also be found more economical than paper.

Eastman Bromide Fabric is coated with a Bromide emulsion and works in every way like a Bromide paper. It is furnished in one dozen, one-half gross and one gross packages and in ten foot and ten yard rolls. Your dealer will be glad to supply.

photographers first, have the same measure of business ability, and have avoided dropping into the "nothing doing" habit or tradition.

Both classes make a point of understanding the influences which lead people to the studio and those which keep them away.

The business man realizes that the expenses of his establishment are going on all the year round, and he is not satisfied to set against present inaction high pressure work, with overtime charges at another time. He knows that the business that pays best is the business that shows, each day and each week, a turnover that meets standing charges, and leaves the desired margin of profit.



FROM A SEED ORTHOCHROMATIC NEGATIVE



By C. E. Arnold
Dallas, Texas

The complaint that "nothing is doing" is not good enough for the photographic profession.



AN ACKNOWLEDGMENT

Your friends can buy anything you can give them—except your photograph.

In announcing the above slogan in February STUDIO LIGHT we said:

"We claim no credit for this phrase—except that we recognized it as a selling power and lassoed it. We don't even know just where it originated."

The fact is that it was sent in by one of our demonstrators. He wrote to us about it on Christmas day, saying that he had seen it somewhere. He didn't mention it in his letter, but he was evidently making a Christmas present of the slogan to the entire fraternity. And it is a valuable gift.

Since that time we have noted the same *idea* elsewhere. The Cook Studio of Stevens Point, Wis., put out a very attractive little circular last Christmas entitled "A Christmas Suggestion," in which three reasons were given why photographs make good Christmas gifts. One of these reasons was: "Because they are things your friends cannot buy."

It seems, however, that a similar slogan (originated by Mr. Clarence I. Browne) was used at

an earlier date in an advertisement of Messrs. Browne & Browne in the Dallas street cars. The idea as expressed by them read as follows: "Back home they can buy any gift you may send them except a photograph of you."

It is probable that the present slogan is an evolution from the one used by Mr. Browne. Anyway, it has the punch. We take off our hat to Mr. Browne and to Mr. Cook. When we find out, as we hope to, the name of the man who first said: "Your friends can buy anything you can give them—except your photograph," we shall take off our hat to him.

Meantime let us all make the most of it.



YOUR STATIONERY

A man's personality is shown in many ways. It advertises him and his business, whether it is shown in his work, his personal manners, his stationery or direct advertising.

For the most part, we think of a photographer's personality as a part of his work—the individuality he puts into his portraits, that makes us say "That's Roe's work. I can recognize his style anywhere." Such a personality is an asset because we grant that it is a pleasing personality or we would not have become so well acquainted with it.

And if you never came in contact with Roe, personally, you might form an opinion of him from his direct advertising.

The average person who receives a neatly written letter from a photographer on dignified artistic business stationery will take it as an indication of the character of the writer's business. He will feel that the photographer's work is in keeping with his stationery and that any work he might have done would receive the same careful attention and be in as good taste.



EASTMAN PROCESS FILM

Eastman Process Film has all the advantages of the best Process Plates but none of their disadvantages. It will give any contrast up to the maximum and may be used in every instance where a process emulsion is desirable.

Eastman Process Film is especially suited for line work or other black and white copy where great contrast is necessary. At the same time when used for making positives the results are all that could be desired.

There are special advantages in Process Film for Photo Mechanical Processes, one of these being that one can print through the back of the negative when a reversed print is desired.

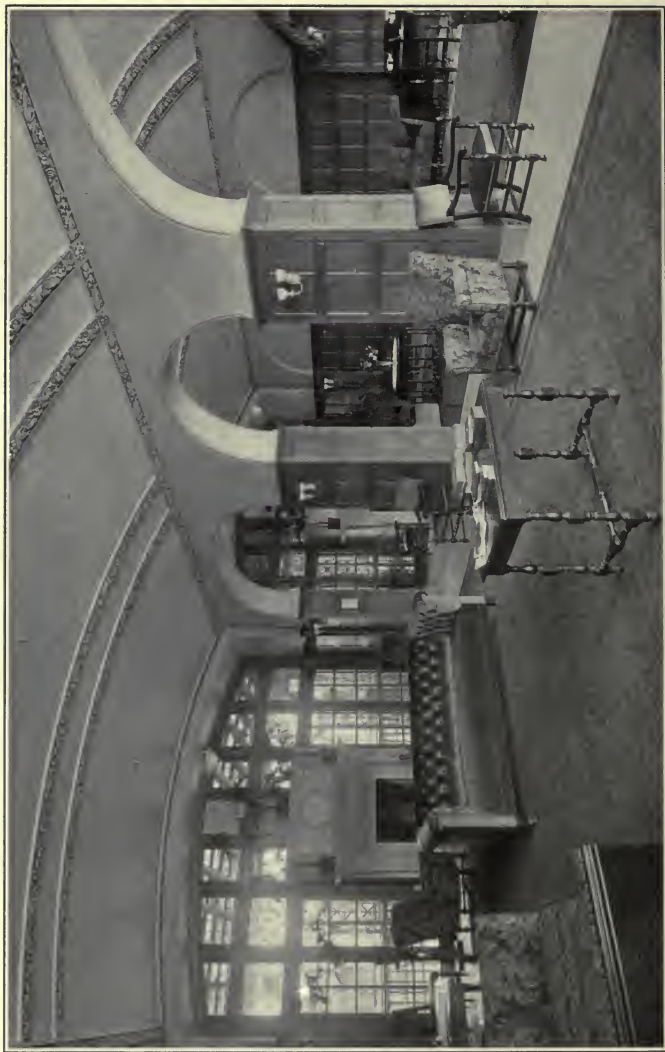
The film is a convenience in making positives for the Roto-gravure Process as the positives secured on film may be cut to any size, reversed, when desired, and a page make-up secured with little trouble and in a fraction of the time required when plates are used.

In copying old, faded photographs, where there is little more than a yellow image, the proper exposure on a Process film will often give the best possible result. The film is not color sensitive and if the image is yellow it will photograph almost as clear and clean as though it was black.

Process Film may be used for making original negatives whenever contrast is desired and the subject will permit of the exposure necessary for the slow emulsion. Commercial photographers will find much use for this film in photographing labels, plans, documents, etc., in black and white and even in colors where it is not necessary to retain the color values.

Those who have become acquainted with the many conveniences of Eastman Portrait Film—its lightness, flexibility, non-halation properties, and the ease with which it is handled, will find Eastman Process Film of equal quality for all work requiring a Process emulsion.

Prices are the same as for Eastman Portrait Film.



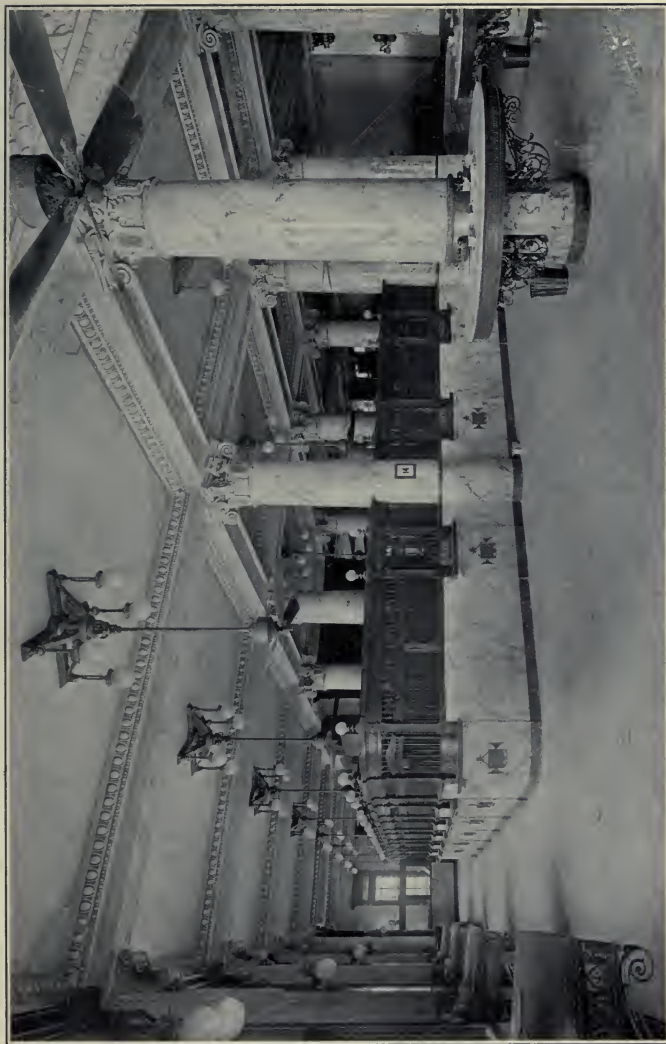
FROM A SEED ORTHOCHROMATIC NEGATIVE

By C. E. Arnold
Dallas, Texas





FROM A SEED ORTHOCHROMATIC NEGATIVE



By C. E. Arnold
Dallas, Texas

COPYING HINTS

Exposure for copies is rather a difficult thing to determine owing to the variation of the object to be copied and the necessary camera extension. Of course, it is understood that as the distance from lens to plate increases, the *f.* value of a given stop decreases, and this rather has a tendency to complicate the process of mental arithmetic necessary to correctly figure exposures.

An *f.*8 stop is *f.*8 because its diameter is $\frac{1}{8}$ of the focal length of the lens with which it is used. If such a lens is used for copying and the camera extension is twice the focal length of the lens, the stop value becomes *f.*16, which requires 4 times as much exposure as *f.*8.

For certain kinds of work the exposure may be fixed by increasing or decreasing the diameter of the stop with the increase or decrease of camera extension, the *f.* value of the stop in this way remaining the same.

For example, if an opening of *f.*22 is found satisfactory for the work at hand and the lens has a focal length of 16 inches, for each additional inch of camera extension the stop must be increased $\frac{1}{16}$ of its original diameter.

This requires that the diaphragm ring be given a special marking, which is not always practical. Also the lens opening

may become too large for the best definition.

The best plan for the photographer who has occasional copies to make, probably half a dozen at a time, is to use an artificial light that is practically uniform at all times. Select a stop that is small enough to give sharp definition on any subject it may be found necessary to copy.

When you have found the stop which will answer this purpose, measure its diameter very carefully so the same size opening may be used with any other lens you may choose to use for copying.

The next step is to make a rule or scale that may be used to measure any camera extension you may find necessary for producing a copy of the correct size. Spaces are marked off on this scale and numbered from one up, each space being exactly equal to the diameter of the stop you have chosen.

To prove that your scale is right, if your lens has a focal length of $10\frac{1}{4}$ inches and the stop you have selected is *f.*8, the marking on your scale at $10\frac{1}{4}$ inches should be 8.

By using this same stop on all occasions it is only necessary to measure the camera extension with your improved scale to find the stop value for that particular extension.

With artificial light of reasonably uniform intensity finding the



FROM A SEED ORTHOCHROMATIC NEGATIVE

By C. E. Arnold
Dallas, Texas



correct exposure for one extension makes it possible to estimate the exposure for any other extension.

The stop values which theoretically double the exposure are f.4, 5.6, 8, 11, 16, 22, 32, 45, 64, 90, 128, 180, 256, 360, etc. If your camera extension measures 11 on your scale, showing your stop has a value of f.11 and your exposure is 10 seconds, the exposure at 8 would be 5 seconds, at 16, 20 seconds, at 22, 40 seconds, at 32, 80 seconds, etc., and these exposures would be practically correct and would permit you to estimate the exposures in between with a much fairer degree of accuracy than is possible by making copy exposures hit and miss.

Many photographers hate to make copies because of the uncertainty of exposure and the resulting loss in plates. A copying scale which will determine accurately this change in stop values and the necessary exposure for any camera extension, will simplify the process to such an extent that making a good copy negative will be a thing you can depend upon.

There is good money in making copies if you make them right. The ordinary plate will answer if you have a good original. More often an orthochromatic plate and filter will give a better result.

Many photographs that are to be copied are slightly yellowed

with age. An ordinary plate accentuates this fault, while an orthochromatic plate and filter will cut out the yellow and produce a negative almost as clean cut as the one from which the original print was made. Of the K filters (1, 2 and 3) the one which is equal to or darker than the discoloration of the print should be used. This can only be determined by experimenting.

If you have an important piece of work and can charge for your trouble it is often advisable to make the best negative possible—retouch the negative carefully—make an enlargement and work it up carefully and copy the enlargement to proper size for contact prints.

The more copies you make the easier you will make them, and you will find they will bring other business. The woman who brings you the poor little faded photograph is probably thinking of having other pictures made. Do your best to make a satisfactory copy and you will secure other business.



*Time saved is as good as
money earned.*

Majestic Print Dryers

*Save time and enable you
to give your customers
satisfactory service.*



FROM A SEED ORTHOCHROMATIC NEGATIVE

By C. E. Arnold
Dallas, Texas





YOUR family have been pleading with you for years—why not make that appointment to-day?

Sitting for a portrait is a matter of minutes only—the same efficient methods you demand in your business are observed in ours.

Your friends can buy anything you can give them—except your photograph.

THE PYRO STUDIO

No. 224. Price, 50 cents.—

THE ONLY CONDITION

We make but one condition in our offer of cuts for the use of photographers.

It is obvious that two photographers in the same town would not care to use the same cut, and we are therefore obliged to limit this offer to one photographer in a town. It will be a case of first come first

served. The first order from a city will be promptly filled. Succeeding orders (if any) will necessarily be turned down and the remittance, of course, will be returned. It is also obvious that we cannot, on account of the cost of the drawings, furnish any large variety of cuts at the nominal prices quoted, and therefore can offer no substitute cut. Get your order in *first*. C.K.Co., Ltd.

BULLETIN: THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY FOR 1916



Kansas City, Mo. April 11, 12, 13

Omaha, Neb. April 18, 19, 20

Springfield, Mo. April 25, 26, 27

Wichita, Kans. May 2, 3, 4

Dallas, Texas May 9, 10, 11

Oklahoma City, Okla. May 16, 17, 18





Eastman Studio Reflector

*The appearance
as well as the
utility of
studio apparatus
counts.*

The Eastman Studio Reflector is not only a practical piece of working apparatus but is substantial and good looking as well. The reflector consists of two swinging screens, each 24 x 26 inches, mounted in a strong iron frame. The screens are black on one side and white on the other and may be swung at any angle and securely locked. The frame is on casters and stands six feet high.

Write your dealer for prices.

Canadian Kodak Co., Limited,

All Dealers'.

Toronto, Canada.

Any light will cause fog if you allow it sufficient time,
but you can have maximum illumination with
safety by using the

Wratten Dark Room Lamp

—with—

Wratten & Wainwright Safelights

as indicated below for the several kinds of plates, films
and papers.

Series 00—Bright yellow, for use with D. O. P. in general.

Series 0—Bright orange, for use with Bromide Paper,
Lantern Plates, or very fast D. O. P.

Series 1—Orange, for use with plates that are not color
sensitive.

Series 2—For use with extra rapid orthochromatic plates
and films, not sensitive to red.

Series 3—A special dark green, for use with red sensitive
Panchromatic Plates.

Works by indirect, reflected light only and adequate
ventilation is provided to prevent overheating of the
Safelight. Lamps are furnished with any specified Safe-
light, nine feet of cord and adapter attached, but no
bulb. A 16 c. p. carbon, or 25 watt Tungsten Lamp,
is recommended.

THE PRICE

Wratten Electric Dark Room Lamp, complete with any specified Safelight, cord and adapter . . .	\$5.00
W. & W. Safelights, each	1.20

Canadian Kodak Co., Limited,

Toronto, Canada.

Pyro is the *best* developer for Plates or Portrait Films—it is also, at present, by far the most economical developer.

Get acquainted with this chemical in its most convenient form



Eastman Permanent Crystal Pyro

It is clean to handle—gives off no flying particles of dust—yields negatives of the most perfect printing quality.

*Specify Eastman Permanent Crystal Pyro
in your next order.*

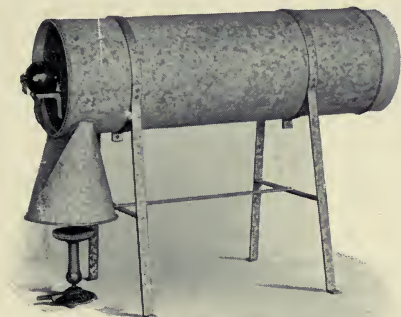
Canadian Kodak Co., Limited,

Toronto, Canada.

All Dealers'.

Improved Majestic Print Dryers

Save time, increase the efficiency of employees and insure the delivery of work when promised.



Improved Majestic Print Dryer No. 1

Prints for delivery, unmounted, loose mounted or in folders are properly shaped and bone dry in from 15 to 20 minutes.

The No. 1 Dryer has an 11-inch drying roll wound on a metal core inside of which fits a 7-inch roll. The large roll is for large and the small roll for small prints. The capacity of the two rolls is about 200 average size prints.

The No. 5 Dryer has five rolls, one 11-inch roll in the center and four 6-inch rolls around this. Its capacity is about 600 average size prints.

The No. 1 will dry from 1,600 to 4,000 prints—the No. 5 from 3,000 to 12,000 prints in a day, depending upon the use of extra rolls and the ability to keep them filled.

THE PRICE

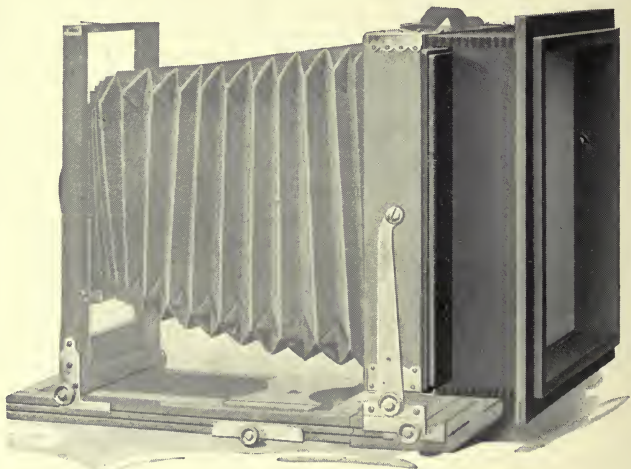
Improved Majestic Print Dryer No. 1, complete with drying rolls, electric motor, fan, gas heater and stand	\$30.00
Improved Majestic Print Dryer No. 5, complete as above	60.00
Extra Drying Rolls, 11-inch, complete	2.00
“ “ “ 7-inch, “	1.75
“ “ “ 6-inch, “	1.50
Extra Muslin-Faced Blotter, for 11 or 7-inch rolls	1.40
“ “ “ “ 6-inch rolls	1.00

CANADIAN KODAK CO., LIMITED,

All Dealers'.

TORONTO, CANADA.

*Create a demand for large prints from small negatives—
and get the long profit by making them yourself.*



The R. O. C. Enlarging Back

Readily adapts the ordinary view camera to enlarging with either artificial or daylight.

Made in $6\frac{1}{2} \times 8\frac{1}{2}$ and 8×10 sizes to fit Empire State and Premo View Cameras. Adapters to fit Century, R. O. C. or Eastman View Cameras supplied without extra charge.

With this enlarging back attached to your view camera the rest of the outfit is quite simply made with little trouble or expense.

*"Enlarging for the Professional," an interesting booklet
on enlarging processes, mailed free on request*

Canadian Kodak Co., Limited,

All Dealers'.

Toronto, Canada.

*The seal with
the certainty
back of it:*



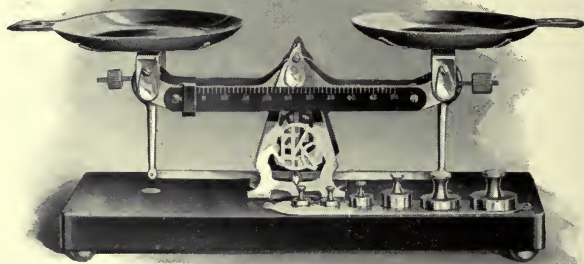
The goods back of the advertising must be right. That's why chemicals bearing this seal must have a full measure of quality as well as quantity. They are tested to maintain their strength and purity at a uniform standard.

*Specify C. K. Co. Tested Chemicals
and be certain of your results.*

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.



Accuracy and convenience combined in the

Eastman Studio Scale

Will weigh from one to fifty grains by a simple adjustment of a sliding weight on a beam—accurately tested weights from fifty grains to two ounces are used for weighing larger quantities.

All weights are plainly marked in grains as well as ounces or fractions of an ounce avoirdupois. All metal parts are nicked except the beam for weighing grains, which is black enameled with white markings. All bearings are of hardened steel and the balance has an extremely sensitive adjustment.

THE PRICE

Eastman Studio Scale . . \$4.00

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

MADE IN CANADA

ROYAL POLYCHROME PLATES

are not panchromatic, but are sensitive to deep orange, that is to say they respond to all colours except the deep reds. Invaluable for general commercial work, for with a K2 filter, they give negatives with a faithful rendering of colour values.

Regular Royal prices apply with a nominal extra charge for backing, when so ordered.

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

SEE THIS NEW ONE—

The Traymore Style



A "Corner"

Holder Style

for 3 x 6 and 4 x 6

Double Weight Prints.

Colors:

White Insert, Grey Cover—

Sepia Buff Insert,

Golden Brown Cover—

Dark Brown Insert,

Dark Brown Cover.

The Traymore, a new design for slipped in corner prints, which shows all of the print and makes it look larger and brings the price easier. A strip of cardboard is inserted under the raised embossed corners which assures easy mounting. The cover is extra weight with cloth finish effect and a neat embossed design on smaller flap. A very attractive folder.

SAMPLE MAILED FREE

MANUFACTURED BY

Canadian Card Co., Toronto, Can.

OUR POLICY

Our business was established on a quality basis. It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

Our theory is that we can best serve ourselves by supplying our customers the best goods. Our acts have made this Theory a Policy, for we have not merely the desire to make the best goods but the means of converting that desire into a Reality.

In thirty years in the photographic business there have been several revolutionary changes. Doubtless there will be many more. Whatever they may be our Policy shall be to furnish (without following every mere will-o'-the-wisp) the very best of those goods which painstaking testing shall prove to be of benefit to our customers in the Simplification of Photographic Processes and the Advancement of the Art.

C. K. Co., LTD.



FROM A BROMIDE PRINT

By Pearl Grace Loehr
New York, N. Y.



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

ESTABLISHED 1901

ESTABLISHED 1906

VOL. 8

MAY 1916

No. 3

ADVERTISING SLIDES

We receive letters every few days asking if we would advise advertising in motion picture theatres, and if so, where good lantern slides can be obtained.

The answer to the first question is that it does pay to advertise in this way if the movies in your town get the people to whom you want to sell pictures.

Some photographers have told us that their motion picture theatre advertising has brought fine results, and we think it should if the ads and the slides are good.

To the second question we would say that the best place to obtain lantern slides *should* be in your own studio.

A little over a year ago, January, 1915, to be exact, we illustrated a very simple method of making these slides in your own studio, and for fear you may have allowed the idea to pass without notice, we will repeat it briefly.

Select one of the advertising

suggestions from page 22 and paste this on a card. Cut your own name and studio address from one of your letter-heads and paste this over the line at bottom of ad (The Pyro Studio). Copy this on a Royal Process Plate. Guard against overtiming and develop to good density. Make the copy the exact size you wish it to appear on your slides, and these may be printed direct from your copy negative. The fact that you have pasted the paper across the bottom of the ad and that it is not the same color of paper as that on which the ad is printed does not matter so long as it is white or near white. If your negative is developed to the proper density only the letters and the black lines of the cut will print on your lantern slide.

The question has also been asked, "How can good advertising slides be obtained when you want reading matter and a photograph to appear on the same slide?"

While very fair results can be secured with reading matter and illustration together, if reading matter is printed on a card and the photograph mounted on same and copied, better results can be secured in another way.

The very best results from printed matter are obtained by copying on a Process Plate or Film, and the most effective slides of printed matter are those in which the letters show white on the screen with all the background dark.

This is simple if a good process negative of black type matter on white is made. A positive is made from this on Process Film and the lantern slide is printed from the positive, the result being a black ground with transparent letters.

A separate negative is made of the photograph which is to be used as the illustration and this is also printed on a lantern slide, the two slides, one containing reading matter and the other the illustration, being bound together film to film.

For example,—the advertisement is to occupy a space on the slide $2\frac{1}{2} \times 3\frac{1}{4}$ inches. This space must be divided in such a way as to allow for reading matter and picture side by side. Suppose these occupy equal spaces. The reading matter must be copied to fit a space $1\frac{5}{8} \times 2\frac{1}{2}$ inches, and

the picture to fit the same size space, allowing margin between for a mask.

Also, for example, reading matter and pictures are both printed on the left of the slide, for when one slide is turned to bring the two film to film, the matter on that slide is reversed from left to right, bringing the picture and reading matter side by side. A mask cut with two openings and placed between the slides finishes the job.

A trifle simpler method is to make a negative of the printed matter on Eastman Process Film the exact size it is to appear on slide. Make a positive from this, being sure to secure good density. Now make a film negative of the photograph which is to accompany the text, developing this for detail and gradation. Cut these two, the film negative and positive, to exact size, attach them to a piece of glass and print your lantern slides by contact. The two pieces of film should not be masked, as the clear glass around them will print a mask on the lantern slide. Cover glass and binding finishes the slide.

Either of these methods is simple when worked out and the results will be found much superior to slides made from a single negative of reading matter and illustration combined.





FROM A BROMIDE PRINT

By Pearl Grace Loehr
New York, N. Y.



SWEETEN TO TASTE

or how to make

A SUBSTITUTE DEVELOPER

A WAR TIME STUDY IN HIGH FINANCE

J. Rufus Wallingford has entered the photographic arena. Blackie Dawes has ironed out his silk hat, re-waxed his mustache, put on his famous tan spats and is seeking whom he may devour.

The shell game man has his lay-out spread on the table and the gold brick gent has packed his satchel with phoney money.

The market price of sugar, just plain sugar such as you carelessly dumped into your coffee at breakfast this morning, has gone to twenty-five dollars a pound, salt is as precious as platinum and starch can no longer be used on your fine linen.

You don't need to call the police to protect you. But you will probably go down to the surrogate's court and ask to have a guardian appointed if you buy some of the "substitute" developers on the market, and after finding that they don't work as well as they should, you send them to an analytical chemist for a report.

The Kodak Park Research Laboratory has been doing some valuable work for you. Here is what was found in a "developer" that sells for over \$30.00 per pound: Metol 10%, Hydro-

chinon 16%, Sodium Sulphite 30%, *cane sugar* 33%. Other constituents (mostly water) of no value as developer, 11%. Figuring Metol at \$50.00 per pound you could make up this same "developer" for less than \$6.50 a pound.

"Sweeten to taste" seems to be the rule in the manufacture (!) of war-time developers. Three contain sugar in quantities varying from 30% to 50%. But sugar is not the only table luxury introduced. Another contains 36% of table salt and some Pyro, while another contains 40% of the ordinary wash-tub variety of starch. The directions on the bottle do not state whether or not this starch acts as a mountant and does away with the necessity for the use of paste.

Anyway, it's better for the photographer to buy his paste separately from his developer. It's likely to save him from fifteen to twenty dollars a pound.

The warning is: Make your own substitutes. If you want to use sugar, salt and starch in your developer, go to the grocer. He may charge you war prices but not Wallingford prices. The manufacturers of papers and plates



FROM A BROMIDE PRINT

*By Pearl Grace Loehr
New York, N. Y.*



are keeping chemical prices as low as possible and are publishing revised formulas to help out the situation. Watch the direction sheets and make your own substitutes.



OUR ILLUSTRATIONS

Our illustrations this month are characteristic of the work of Miss Pearl Grace Loehr, who is to make one of the two formal demonstrations at the coming National Convention in Cleveland.

Miss Loehr is known to the profession as past president of the Women's Federation of Photographers, a position which she filled with ability. Her work has been in New York City exclusively and her specialty is home portraits of children.

Miss Loehr is strictly a Bromide and Gum worker, but is most enthusiastic over Bromide. She believes there is no other method of working that can bring out so much beauty, individuality and cleverness as Bromide enlarging and that as a medium for children's work it cannot be excelled.

Miss Loehr has taken charge of a Department of Photography which has recently been established in the New York School of Fine and Applied Arts. This is the first Art School of the country to recognize photography as a Fine Art and to establish it

as a permanent department. In addition to the technical and mechanical side of the work, a special course of drawing, composition and illustration, as applied to photography, has been worked out.

In her demonstration at the Cleveland Convention, Miss Loehr will have her regular assistant and will demonstrate the methods used by her in the home portrait work which has made her so successful in New York.



CONSTRUCTION OF SKYLIGHT IN CONFINED SITUATION

A problem in studio construction which is especially difficult to solve satisfactorily is how to build a skylight to secure the best and most uniform illumination when an adjacent building obstructs the light at the point where the skylight should be located. This is especially difficult when the space between the buildings must be narrow and the obstructing wall is very high.

In extreme cases, perhaps the only satisfactory way to solve this problem is to abandon the idea of having a northern exposure for the skylight and erect an east, south or even a west light, which we mention in order of preference.

Next to a north light an east light would be recommended.



FROM A BROMIDE PRINT

By Pearl Grace Loehr
New York, N. Y.



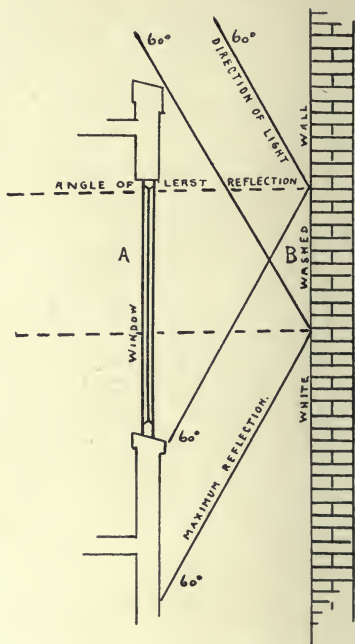
When this is not expedient, choose the south, and only as a last resort the west light. The reason for these various types we may elaborate more fully in some future article for *STUDIO LIGHT*. Just now we are dealing with the question of angles, reflections and refractions when building a north light and having an opposite building to contend with.

Some photographers when attempting to grapple with the difficulty resort to a dependence upon reflected light. They argue that by painting or whitewashing the opposite wall it will afford sufficient illumination.

The fallacy of this conclusion, even if the light was reflected into the studio, will be seen at a glance if we remember the axiom that light diminishes in ratio to the square of the distance from its source.

Reflected light, therefore, at a distance of four feet from the white wall would be one-sixteenth as strong as the illumination on the wall itself and at ten feet only one one-hundredth as strong. This disposes of the idea of reflected light, for anyone will appreciate the difficulty of trying to work under such conditions, especially in dull weather.

Another thing which is not properly considered is the angle of reflection. The law of reflection is that the angle of reflection is equal and corresponds to the angle of incidence. For example,



light striking a white screen, reflector or mirror at a certain angle is reflected from such surface at the same angle. Light falling on a surface at an oblique angle is reflected at an oblique angle; if at an acute angle, the reflection is acute and a right angle reflection only occurs when light falls at an angle of 45 degrees to the surface of the reflector.

The accompanying drawing will illustrate this. "A" represents the window or skylight and "B" the reflector. The straight lines extending upward at an

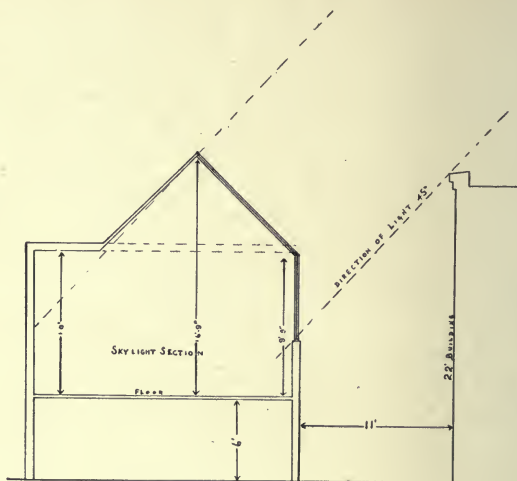


FROM A BROMIDE PRINT

*By Pearl Grace Loehr
New York, N. Y.*



angle of 60 degrees represent the oblique angle of incidence, which is the general direction of light from the sky into the light well between the buildings. The straight downward lines represent the corresponding oblique angle of greatest reflection. The dotted lines show where the photographer wants the most light but where he really gets the least reflection.



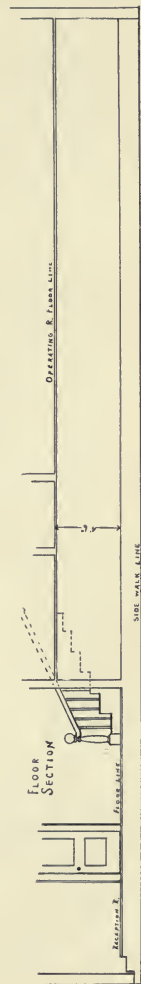
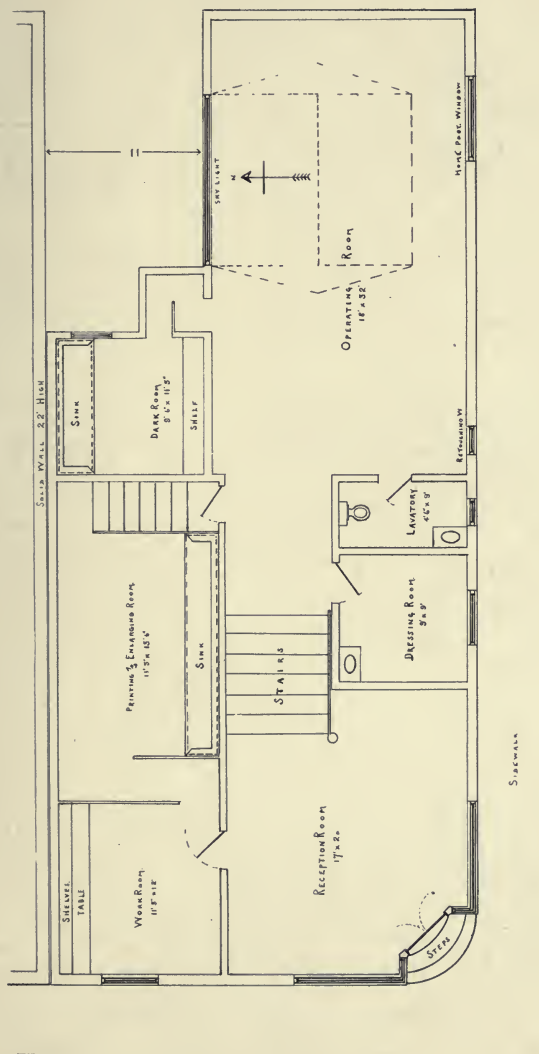
A very good way to secure illumination is by refracted light obtained by means of using prism glass. However, the use of such glass involves a somewhat intricate problem in placing a skylight at the proper angle to correspond to the peculiar angle of the prisms in the glass. We will not go into this matter, as space does not permit, and each case presents an individual problem.

The most practicable and feasible method of overcoming obstructions is to elevate the studio—in other words to rise above your troubles. This is easy where one can build a two-story studio. If placing the operating room on the second floor does not lift the skylight quite high enough to get unobstructed light, the operating

room floor may be raised a couple of feet above the rest of the second floor.

In the case of a ground floor studio with an adjoining two-story building on the north side, the main portion of the studio, including reception room, work room, etc., would be on the ground floor. Back of this, and several feet higher, the operating room should be built. And by placing skylight as far as possible from the adjoining building and having the floor elevated the obstruction is overcome.

To illustrate a specific case we will suppose a photographer in a small town has a corner lot with a 30 foot frontage and a 68 foot depth. Next to him on the north is a building 22 feet high. The



photographer in this case would overcome his trouble and secure good illumination and really have a most attractive studio by building somewhat in accordance with the plan which we print here-with as an illustration.

By having the operating room up a short flight of steps a certain seclusion is secured and an air of elegance is given to the entire studio. At slight additional cost, a basement storeroom could be made under the operating room. It will be seen that the space between the buildings is great enough for the light to pass over the building and illuminate the skylight at its lowest point.



BACK NUMBERS

We have many requests for back numbers of *STUDIO LIGHT*, some of which we are unable to supply.

We are always glad to give any information possible by correspondence, but the occasion often arises when you want quick action. And if the answer to your inquiry—the information you seek—has been published in *STUDIO LIGHT*, the advantage of a file of such information is apparent.



It's a Seed Plate you need.

HYDROCHINON RESULTS

In the March number of *STUDIO LIGHT* we suggested an All-Hydrochinon substitute for Elon or Metol developers for papers, as many photographers are entirely out of these chemicals and unable to obtain a further supply.

Most of the reports we have received indicate that this All-Hydrochinon developer has produced results practically as satisfactory as Elon or Metol developers.

There have been some complaints—some little troubles are always encountered in making so radical a change. However, the trouble has not been with the formula, it has been in the way it was used.

With the Elon or Metol developers there is a fairly wide range of temperature at which the developer will produce good results. With Hydrochinon this is not the case. Its latitude in this respect is very narrow.

The All-Hydrochinon developer we suggested gives the *best* result at 68 degrees. If the temperature goes over 70 degrees the prints will immediately become flat. On the other hand, if the temperature of the solution falls to 65 degrees or below that point, the developer works slowly and the prints show too much contrast. And as the developer



FROM A BROMIDE PRINT

By Pearl Grace Loehr
New York, N. Y.



slows up there is naturally an inclination to over-expose prints and muddy green tones are the result.

It may seem an inconvenience to you to watch temperatures so closely, but present conditions cannot be altered. It is up to each worker to use care and secure the best results with the chemicals he has to work with.

It will be noticed that there is a larger percentage of carbonate of Soda in the All-Hydrochinon developer than has ever been used in any of the Elon or Metol developers and it has been found necessary to neutralize this large amount of alkali before the print goes into the fixing bath. If this is not done the alkali in the prints will soon neutralize the acid in the fixing bath and the results are much the same as though an old and over-worked bath were used. Stains will sometimes result, prints may soften and the fixing bath is soon in as bad condition as though it had been used for a long time.

The regular Short Stop Formula recommended for Artura: Water, 32 ounces, No. 8 Acetic Acid (28% Pure), 1½ ounces, should be used to rinse prints between developing and fixing. As this acid bath becomes neutralized it should be thrown away and a fresh solution prepared and used.

It is also important that the chemicals in this formula, as with

all formulas, should be dissolved in the order named.

By taking these precautions, All-Hydrochinon results will be found exceptionally satisfactory.



THE 1916 KODAK ADVERTISING COMPETITION—\$3,000.00 CASH

TEN PRIZES, \$100 TO \$1,000 EACH FOR THE BEST PICTURES FOR ILLUSTRATING KODAK ADVERTISING

TELLING THE STORY

The backbone of our national magazine advertising is based on photographs that we receive through these annual competitions, pictures that tell of the charm of picture making by the simple Kodak method.

These pictures are not necessarily pictures made with Kodaks, but are pictures showing Kodaks or Brownies in action, pictures that suggest the delights of amateur photography.

They are not for sample print work, but are for *illustrating* advertisements, are for use in telling the story of the witchery of Kodakery.

The use of photographs as illustrations in advertising is growing steadily, rapidly. For the photographer who goes thoughtfully and carefully at it there is good money in making such pictures. There is a growing mar-



FROM A BROMIDE PRINT

By Pearl Grace Loehr
New York, N. Y.



ket. Our competitions offer to the photographer an interesting way of taking up such work. And the prizes are well worth while.

THE PRIZES

First Prize	\$1000.00
Second Prize	500.00
Third Prize	350.00
Fourth Prize	250.00
Fifth Prize	200.00
Sixth Prize	180.00
Seventh Prize	160.00
Eighth Prize	140.00
Ninth Prize	120.00
Tenth Prize	100.00

The winner of the First Prize shall be awarded no other prize and no competitor shall be awarded more than two prizes.

TERMS

1 Each picture is to contain a figure or figures and is to be suitable for use as an illustration in advertising the Kodak or Kodak System of amateur photography.

2 Pictures may be of any size, but as they will often be reproduced in large size, large pictures will, *everything else being equal*, be given the preference.

3 PRINTS ONLY are to be sent for competition—not negatives.

4 Prints must be mounted but not framed. (Mounts should show about one inch margin.)

5 The winner of the first prize shall be awarded no other prize and no competitor shall be awarded more than two prizes. (This does not prevent a competitor from entering as many pictures as he may desire.)

6 Due and reasonable care will be taken of all non-winning prints and, barring loss or accident, they will be returned to their owners at our expense, but we assume no responsibility for loss or damage.

7 The negatives from which all prize winning prints are made are

to become the property of the Eastman Kodak Company, and are to be received by it in good order before payment of prize money is made.

8 Contestants who are awarded prizes must also furnish to us the written consent of the subject (in case of a minor, the written consent of a parent or guardian) to the use of the picture in such manner as we may see fit in our advertising, as per blank forms which will be furnished on application.

*9 All entries should be addressed to

*Eastman Kodak Company,
Advertising Department,
Rochester, N. Y.*

*Entries from Canada should be sent to the Canadian Kodak Company, Toronto, Canada.

10 In sending pictures, mark the *package* plainly, "Kodak Advertising Contest," and in the upper left hand corner write your own name and address. Then write us, addressing "Advertising Department," and advise how shipment was made, mail or express, date, etc., and tell *how many pictures you are sending*.

11 The name and address of the competitor must be legibly written on a paper and enclosed in a sealed envelope in the same package in which the prints are forwarded. There is to be no writing on prints or mounts.

12 We will promptly acknowledge the receipt of pictures, and when awards are made will send each competitor a list of prize winners.

13 This contest will close November 1st, 1916, at Rochester, N. Y., and October 20th at Toronto, Can.

SUGGESTIONS

First of all, it should be remembered that these prizes are not offered for the sake of obtaining sample prints or negatives made with our



FROM A BROMIDE PRINT

By Pearl Grace Loehr
New York, N. Y.



goods. *Merely pretty pictures, merely artistic pictures will not be considered.* The pictures must in some way connect up with the Kodak idea—must show the pleasure that is to be derived from picture taking, or the simplicity of the Kodak system, or suggest the excellence of Kodak goods. Must, in short, help to sell Kodak goods by *illustration* of some one of the many points in their favor.

The jury will be instructed to award the prizes to those contestants whose pictures, all things considered, are best adapted to use in Kodak advertising.

As reproductions of the pictures will often be in small sizes, too much detail should not be introduced.

Pictures for reproduction should be snappy—vigorous, for they lose much by the half-tone process.

Where apparatus is introduced, it must be up-to-date. If you haven't the goods, you can borrow. Apparatus should also be in keeping. A 3A Kodak in the hands of a child is not a convincing combination.

It is highly probable that we shall want to secure some negatives aside from the prize winners. In such cases special arrangements will be made.

THE JUDGES

The jury of award will consist of photographers and of advertising men who are fully competent to pass upon the work submitted. Full attention will be paid therefore to the artistic and technical merit of the work as well as to its strength from an advertising standpoint.

Announcement of the names of the judges will be made later.



Accuracy is easy with an

EASTMAN

VISIBLE GRADUATE

HATS OFF!

In the April issue of *STUDIO LIGHT* we announced, in connection with giving credit to Mr. Browne of Dallas and Mr. Cook of Stevens Point for phrases similar to "*Your friends can buy anything you can give them—except your photograph,*" that we would again take off our hat when we found the originator of that precise phrase.

We haven't found him, but we have found a man that came mighty close to it and he seems to have antedated all of them.

Mr. B. P. Young of Carlisle, Ky., writes us that as the heading of his holiday advertisement in the *Nicholis Advocate*, for Dec. 20th, 1911, he used the line: "*Give them something they can't buy.*"

Our hat is off to Mr. Young. Good thing the weather is getting warmer.

Next!



You can know your overhead expense, your cost of production and your profits if you install the

EASTMAN
STUDIO SYSTEM

Ask your dealer.



FROM A BROMIDE PRINT

By Pearl Grace Loehr
New York, N. Y.





Her Photograph

*Make the appointment
to-day*

THE PYRO STUDIO

No. 225. Price, 50 cents.

THE ONLY CONDITION

We make but one condition in our offer of cuts for the use of photographers.

It is obvious that two photographers in the same town would not care to use the same cut, and we are therefore obliged to limit this offer to one photographer in a town. It will be a case of first come first

served. The first order from a city will be promptly filled. Succeeding orders (if any) will necessarily be turned down and the remittance, of course, will be returned. It is also obvious that we cannot, on account of the cost of the drawings, furnish any large variety of cuts at the nominal prices quoted, and therefore can offer no substitute cut. Get your order in *first*. C. K. Co., Ltd.

BULLETIN: THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY FOR 1916



Dallas, Texas May 9, 10, 11

Oklahoma City, Okla. May 16, 17, 18

Salt Lake City, Utah May 30, 31, June 1

Los Angeles, Cal. June 6, 7, 8

San Francisco, Cal. June 13, 14, 15



THE PROPER WAY

to prepare prints for the
MAJESTIC PRINT DRYER
is to blot off surface water,
place prints face down on the
muslin-faced blotters, *cover
them with plain blotters*, then
roll and insert in the Dryer.
The plain blotter is necessary
to avoid marks from pressure
of the corrugated board and
with double weight prints it
may be necessary to reduce
the number of prints dried
at a time.

WANTED

OLD NEGATIVE GLASS

We will purchase Old Negative Glass, $4\frac{3}{4}$ x $6\frac{1}{2}$ and larger standard sizes, providing same is in good condition and packed carefully, in accordance with our instructions.

We will pay all the freight on shipments of 100 lbs. or more, except from localities where the freight rate exceeds \$1.00 per 100 lbs., in which case the shipper will be required to pay the excess.

Prices and further particulars will be furnished on application.

Canadian Kodak Co., Limited,

Toronto, Canada.

Department S.

Pyro is the *best* developer for Plates or Portrait Films—it is also, at present, by far the most economical developer.

Get acquainted with this chemical in its most convenient form



Eastman Permanent Crystal Pyro

It is clean to handle—gives off no flying particles of dust—yields negatives of the most perfect printing quality.

*Specify Eastman Permanent Crystal Pyro
in your next order.*

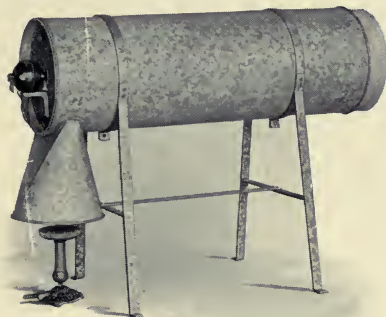
Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

Improved Majestic Print Dryers

Save time, increase the efficiency of employees and insure the delivery of work when promised.



Improved Majestic Print Dryer No. 1

Prints for delivery, unmounted, loose mounted or in folders are properly shaped and bone dry in from 15 to 20 minutes.

The No. 1 Dryer has an 11-inch drying roll wound on a metal core inside of which fits a 7-inch roll. The large roll is for large and the small roll for small prints. The capacity of the two rolls is about 200 average size prints.

The No. 5 Dryer has five rolls, one 11-inch roll in the center and four 6-inch rolls around this. Its capacity is about 600 average size prints.

The No. 1 will dry from 1,600 to 4,000 prints—the No. 5 from 3,000 to 12,000 prints in a day, depending upon the use of extra rolls and the ability to keep them filled.

THE PRICE

Improved Majestic Print Dryer No. 1, complete with drying rolls, electric motor, fan, gas heater and stand	\$30.00
Improved Majestic Print Dryer No. 5, complete as above	60.00
Extra Drying Rolls, 11-inch, complete	2.25
" " " 7-inch, " 	2.00
" " " 6-inch, " 	1.75
Extra Muslin-Faced Blotter, for 11 or 7-inch rolls	2.20
" " " 6-inch rolls	1.60

CANADIAN KODAK CO., LIMITED,

All Dealers'.

TORONTO, CANADA.

We know the chemicals are
right by rigid laboratory
tests—you know they are
right by the presence of
this seal on the container:



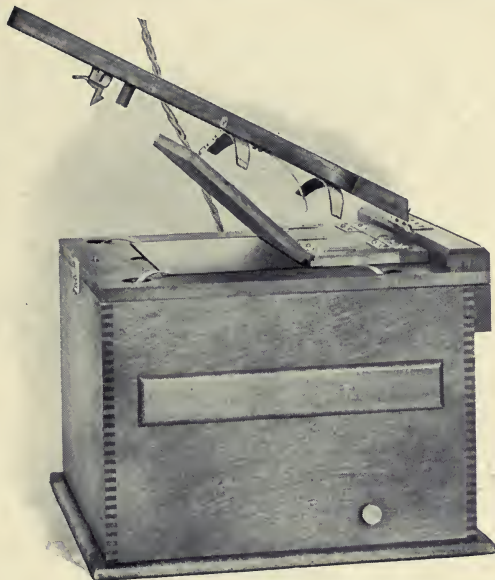
We are both certain.

Canadian Kodak Co., Limited,

Toronto, Canada

At your dealer's.

*A small
professional
printer as
substantial
and
convenient
as larger
printers—
and more
economical.*



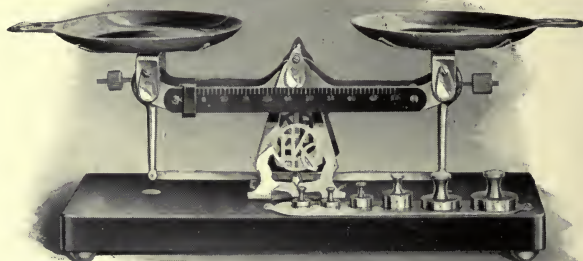
The No. 1 Eastman Printer

should be a part of the equipment of every studio. It accommodates 5x7 and smaller negatives, the printing glass being 8x8 inches square. The printer is operated by a hand lever which operates the back and brings the paper in perfect contact with the negative before it switches the lights on and locks. Releasing the lever turns off the white lights but leaves the red light burning. Two 60 Watt Mazda lamps (not furnished) give ample illumination and the blocks on which they are mounted have a sliding and rack and pinion movement which permits of almost any adjustment of the light. A removable panel in the side of box permits a ground glass to be slid into grooves to diffuse the light. The printer is constructed of hard wood, and the best of metal is used for working parts, all of which are heavily nickeled. The price, including ruby globe and electric cord with plug to fit any ordinary socket, \$10.00, f. o. b. Rochester.

CANADIAN KODAK CO., LIMITED,

All Dealers'.

TORONTO, CANADA.



Accuracy and convenience combined in the

Eastman Scale

Will weigh from one to fifty grains by a simple adjustment of a sliding weight on a beam—accurately tested weights from fifty grains to two ounces are used for weighing larger quantities.

All weights are plainly marked in grains as well as ounces or fractions of an ounce avoirdupois. All metal parts are nicked except the beam for weighing grains, which is black enameled with white markings. All bearings are of hardened steel and the balance has an extremely sensitive adjustment.

THE PRICE

Eastman Scale \$4.00

Canadian Kodak Co., Limited,

Toronto, Canada.

All Dealers'.

ARTURA CARBON BLACK

enables you to produce from small negatives large pictures, which render the qualities of the negative as faithfully as would contact prints. That's to your advantage.

"Artura Results" gives detailed information about Carbon Black

Canadian Kodak Co., Limited,
Toronto, Canada.

SEE THIS NEW ONE—

The Traymore Style



A "Corner"
Holder Style
for 3x6 and 4x6
Double Weight Prints.

Colors:
White Insert, Grey Cover—
Sepia Buff Insert,
Golden Brown Cover—
Dark Brown Insert,
Dark Brown Cover.

The Traymore, a new design for slipped in corner prints, which shows all of the print and makes it look larger and brings the price easier. A strip of cardboard is inserted under the raised embossed corners which assures easy mounting. The cover is extra weight with cloth finish effect and a neat embossed design on smaller flap. A very attractive folder.

SAMPLE MAILED FREE

MANUFACTURED BY

Canadian Card Co., Toronto, Can.

OUR POLICY

Our business was established on a quality basis. It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

Our theory is that we can best serve ourselves by supplying our customers the best goods. Our acts have made this Theory a Policy, for we have not merely the desire to make the best goods but the means of converting that desire into a Reality.

In thirty years in the photographic business there have been several revolutionary changes. Doubtless there will be many more. Whatever they may be our Policy shall be to furnish (without following every mere will-o'-the-wisp) the very best of those goods which painstaking testing shall prove to be of benefit to our customers in the Simplification of Photographic Processes and the Advancement of the Art.

C. K. Co., LTD.



SEED PLATE NEGATIVE, ARTURA PRINT

*By H. C. Watton
Oklahoma City, Okla.*



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

ESTABLISHED 1901

ESTABLISHED 1906

Vol. 8

JUNE 1916

No. 4

COLORING GLOSSY COMMERCIAL PRINTS

In certain lines of commercial work such as the photographing of china or other colored objects it is an advantage to be able to show, not only the design but its color as well. And as the customer requires, or at least prefers glossy prints, the way to color these prints in a satisfactory manner has been a problem with many commercial workers.

It is quite possible to do this coloring on the glossy print after it has been squeegeed, using Velox Water Color Stamps or similar colors, but only on condition that the surface of the print is absolutely free from grease and the colors are not used too wet.

The slightest finger mark or other trace of grease on the print will prevent the colors from taking hold properly. And as ferrotype plates must be greased or waxed to prevent prints from sticking, the print should first of

all be gone over thoroughly with ether to remove this grease.

Alcohol will not answer the purpose as it appears merely to spread any grease present instead of entirely removing it.

Ox gall is sometimes recommended to make the color take. This is not necessary if the print is thoroughly clean, and it has the disadvantage of precipitating certain colors.

However, putting the color on after squeegeeing does not give quite as good a result as putting it on before, but the problem has been to prevent the colors from running when the print was placed in water preparatory to squeegeeing.

The success of the process lies in the hardening of the print before and after coloring. Prints to be colored should be soaked in a five per cent. solution of phospho-tungstic acid for three minutes, then taken out and all superfluous moisture removed. The Velox Water Colors are then

put on with as dry a brush and as little water as possible. The color is put on while the print is damp, but it must not be so wet that the color will run.

The color is put on while the hardened print is moist to enable the colors to soak in better. If the print is hardened and allowed to dry and the colors then put on they remain more or less on the surface and the color has a tendency to run when the print is again moistened.

It is therefore better, especially in the case of large prints, to lay them on a piece of blotting paper previously soaked in the phospho-tungstic acid bath to keep the print moist during the time it is being colored.

After the print has been colored it is placed immediately in the same phospho-tungstic acid bath and then squeegeed directly onto the glass or ferrotype plate. On drying, the gloss of the colored parts will be fully equal to the gloss of the rest of the prints.

Alum, chrome alum or formalin may be used to harden the gelatine, but they are not so satisfactory as the phospho-tungstic acid.



*Large prints on
Artura Carbon Black
retain the contact
quality.*

PROCESS FILM ADVANTAGES

Eastman Process Films have a number of good points other than their use for making line negatives. While they may be developed to any degree of contrast desired they do not produce contrasty results when the developer is modified as recommended in the instruction sheets.

Process Films are excellent for making positives, the fact that they work quite slowly being a decided advantage. If you are not accustomed to making positives of negatives that are quite valuable you are overlooking the best form of insurance you can possibly have.

You may have negatives that could not be duplicated—negatives that are a constant source of revenue, and yet to the insurance company they have no greater value than the negatives from which you never expect to receive another order.

With a set of good positives safely filed away you are insured against fire, breakage or any other damage, for you can reproduce your negatives at will.

But your positives should not be stored in the studio. Don't put all your eggs in one basket. A Process Film is about one-sixth the thickness of an ordinary plate, so a hundred film positives may readily be stored in your home in the space that would



SEED PLATE NEGATIVE, ARTURA PRINT

*By H. C. Watton
Oklahoma City, Okla.*



be occupied by fifteen or twenty glass plates.

Your very best insurance is to use film for your original negatives as more negatives are damaged by breakage than by any other one cause. But even if this is done you may have valuable negatives that were made before you began using film. Breaking one of these might entail a loss that would be greater than the expense and trouble of making a large number of positives.

Process Film has the finest grained emulsion of any plate or film made and for this reason is especially suited for negatives from which enlargements are to be made. The size of enlargement which may be made without objectionable grain is almost unlimited. Of course, the emulsion of Process Film is not rapid enough to be practical for portraiture, but it may be used to good advantage where exposures do not need to be instantaneous and especially when the negative is made with the idea of using it for making enlargements.

The fine grain of the Process Film is also an advantage in making copies, most of which are enlarged to a considerable extent. While the grain of the paper on which the original print was made can only be overcome by careful lighting of the copy, emulsion grain is practically eliminated by the use of the Process Film, and if contrast is

necessary, any degree may be secured by the simple modification of the developer.

Get acquainted with the products that are best suited for any special line of work and you can improve that work to such an extent that it will increase in volume and profit proportionately.



OUR ILLUSTRATIONS

Our illustrations are from an excellent lot of Artura prints made by Harry C. Watton of Oklahoma City, Okla.

While Mr. Watton is a comparatively young man, he has had a great deal of photographic experience, having operated a studio for twelve years in Wisconsin and for ten years in Oklahoma City. It was a small town ten years ago, but Mr. Watton decided to stay five years and take a chance on its development.

At the end of the five years, with a population of 65,000, the city had made good with Mr. Watton, as he had made good with its people. A new modern studio in one of the finest business blocks was the result. And in this studio another five years of successful business has almost been completed.

Mr. Watton has been very prominent in Oklahoma convention circles, is a good advertiser and business man and is generally



SEED PLATE NEGATIVE, ARTURA PRINT

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Oklahoma City, Okla.*



recognized as one of the live wires of the profession. If he could be said to have a hobby, it is to produce better photographs that will warrant higher prices.

He attributes his success to the fact that he never has sales or cut prices, uses the best materials he can buy, regardless of cost, and is constantly striving to better his work.

Mr. Watton does all his own negative making, uses Seed Plates exclusively, summer and winter, and Artura for his highest grade work.

One of Mr. Watton's best advertising slogans is "*The name Watton on your photograph means as much to you as the word Sterling on your silver,*" and the constant effort to live up to that bit of advertising slogan will keep any conscientious workman keyed up to the best that is in him.



SEED PLATES

have the long scale of gradation, the fineness of grain, the softness and delicacy necessary to produce your most perfect lighting with accuracy.

It's a Seed Plate you need.

DON C. SCOTT

It is with deep regret that we announce the death of Mr. Don C. Scott, lecturer and demonstrator with the Eastman School of Professional Photography.

Don Scott was probably as popular with and had as large an acquaintance in the profession as any demonstrator of recent years. He was a faithful and conscientious worker, a genial, big-hearted friend and was loyal to his firm and his business associates.

He was born in Friendship, N. Y., in 1869, and at the age of sixteen began his career in a professional theatrical organization. After this experience he became a professional photographer and following several years of successful business was employed by the Eastman Kodak Company as a demonstrator and lecturer for its Professional School.

His stage experience probably accounted for his pleasing address and simple manner of imparting information to others. Don Scott was placed on the staff of the Eastman School nine years ago and faithfully performed his share of the work until the recent Indianapolis session of the School.

A cold, contracted several weeks before, developed into pneumonia. Mr. Scott was removed to the hospital and was given every possible medical at-



SEED PLATE NEGATIVE, ARTURA PRINT

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tention, the wife who survives him being at his bedside when death came, the afternoon of April 4th.

The remains were sent to his home in Friendship, N. Y., the funeral service being conducted by the Masonic Order, of which he was a member.



Most of us have to do the best we can with inexperienced help these days, and a good deal of material and time may be saved if you'll have your assistants read carefully the articles on page 10 of May number and page 18 of June number—both 1915—which deal with troubles that are peculiarly apt to arise in very warm weather. We all need to be reminded occasionally, and the few minutes spent in looking this up will be well spent.



*The 1916 Kodak Advertising Contest offers
\$3,000 in prizes*

*There are ten prizes from
\$100 to \$1000 each for the
best pictures for illustrating
Kodak Advertising.*

Circular of complete information
on request.

IN VANCOUVER, JULY 4, 5 AND 6

The man who can't learn any more should not attend the Eastman School of Professional Photography for it's dollars to doughnuts that he will learn something in spite of himself.

You just can't listen to the lectures and watch the demonstrations without picking up useful information.

The men in charge of the School don't know everything that's to be known about photographic work, but they travel all over North America, and they do pick up, here, there and everywhere, ideas for getting business as well as improved methods of doing things that have bothered you for years.

The purpose of the School is to help photographers increase their business and make more profit from the business they have, not to sell goods to those who attend, for no one is ever asked to buy anything at the School.

Wherever it has been, the 1916 School has won approval from photographers, and many of the leaders in the profession have expressed their heartiest appreciation.

The lectures and demonstrations in commercial work alone will repay attending.

The time, July 4, 5 and 6—the place, Dominion Hall, 337 Pender Street. Will you attend?



SEED PLATE NEGATIVE, ARTURA PRINT

*By H. C. Walton
Oklahoma City, Okla.*



PLATE PRICES ADVANCE ON LARGE SIZES

In some of the larger sizes the present price of dry plates is less than the cost of the uncoated glass. Silver is up over 50%. Bromide of Potassium is selling at from ten to fourteen times its former price. Gelatine is up and so is everything else that comes into the making, packing and shipping.

So long as our old stocks held out we kept prices down. Our customers have had the full benefit. Prices have been only slightly advanced (by a reduction in discount) on the general run of plates, but in self protection we are now obliged to advance the list prices on plates in the large sizes. All glass is up tremendously—especially the large sizes. Fortunately, the consumption of plates in these sizes is relatively small and so the new list prices are not as important as they seem to be—except to the few photographers who are making big negatives. We would like to hold these prices down but it is obvious that we can not buy glass, coat it, pack it and ship it, and sell it for less than the raw glass costs.

On all of our products we are giving our customers the full advantage of early purchases. As our big stocks become depleted and we have to pay war prices,

we must of necessity make an advance in our prices.

The new list on large plates follows:

SEED "R"

ROYAL

S. E. R., Polychrome
and Process

STANLEY

12 x 20	\$20.00
16 x 20	23.00
17 x 20	25.00
18 x 22	32.00
20 x 24	40.00



For your less expensive work, where price is the big consideration, you have two good papers in the grades of Azo described below:

AZO AA—Coated on a double weight white stock, of a fine grained matte surface. Gives prints of pleasing warmth in black and white, as well as true, rich sepia tones in the Hypo-Alum bath.

AZO H—Coated on a double weight buff stock, of slightly rough matte surface.

Both of these grades are made in one contrast, to fit the portrait negative of average strength and quality.



*Artura produces quality
for quality.*



SEED PLATE NEGATIVE, ARTURA PRINT

*By H. C. Walton
Oklahoma City, Okla.*



SHOULD YOU RAISE YOUR PRICES?

I had a conversation with a friend the other day regarding the general increase in the price of articles which have been affected, one way or another, by the war.

He contended that he should increase his prices on photographs because of the very high cost of chemicals and I agreed with him, but he couldn't determine just how to go about it or how much of an advance in prices to make.

"How do you suppose the dealer or manufacturer determines the price at which he must sell a certain article?" I asked. "There is keen competition—there is no such thing as price agreements between manufacturers or dealers—prices of such goods are fairly uniform and the manufacturer and dealer certainly make a profit."

"Well, I suppose they do, but a dealer pays a dollar for an article and knows just what he must sell it for to make a profit. We have so many things that enter into the cost of a dozen photographs that it isn't so easy."

I suggested that we eliminate photographs from the discussion for a moment and take an easy example. "You buy a hand carved photograph frame for \$3.00 and sell it for \$4.00—how much profit do you make?"

"I make a dollar, of course."

"Now, there is just where you are wrong and where a great many others make a mistake. You may feel perfectly well satisfied to sell that frame at a dollar more than you paid for it, but if your cost of doing business is 25% you are not making a penny of profit."

"It costs money to carry a stock of frames because you have your money invested in them—because you must take care of them, stand the loss on some that become shop-worn and because it takes time and effort to show them, make a sale, deliver the goods and, possibly, to collect the account.

"If it costs you 25% of your gross sales to conduct your business and you want to make a net profit of 15% on your sales, you must add these two items, making 40%, and deduct this from your selling price, 100%, leaving 60% to represent the cost of the article which in the case of the carved frame is \$3.00. If \$3.00 is 60% of the selling price, 1% is one-sixtieth of \$3.00, or \$.05 and 100% is 100 times \$.05 or \$5.00. So you must sell your \$3.00 frame for \$5.00 to make a net profit of 15% on the sale."

"By the same figures you can see that it costs you (25%) \$1.25 to sell the frame and your net profit (15%) is 75 cents."

"You can figure exactly the same way on your photographs once you have your cost of doing

business, for it is a simple matter to determine the cost of material for any given style of picture, allowing for any advance in cost of materials and for waste but not for labor, for that is included in the overhead expense."

"To get an idea of your overhead expense, determine your sales for a given period and all your expenses for the same period, exclusive of the material that goes into the making of a dozen portraits."

"We will say your sales are \$670.00 for one month and your expenses are \$201.00. Then $\$201.00 \div \$670.00 = .30$, showing your average overhead expense is 30% or 30 cents on every \$1.00. This is the correct way of figuring overhead expense in general merchandising, but to make your business profitable you must hold to a fairly even scale of prices or figure a larger profit on some line of cheap work you may decide to make, after you have found your percentage of overhead cost."

"To make this plain, suppose you have styles of pictures selling at \$8.00, \$10.00 and \$12.00 per dozen. You have determined your overhead is 30%. It costs you \$2.40, \$3.00 and \$3.60 overhead, respectively, to produce a dozen of each style."

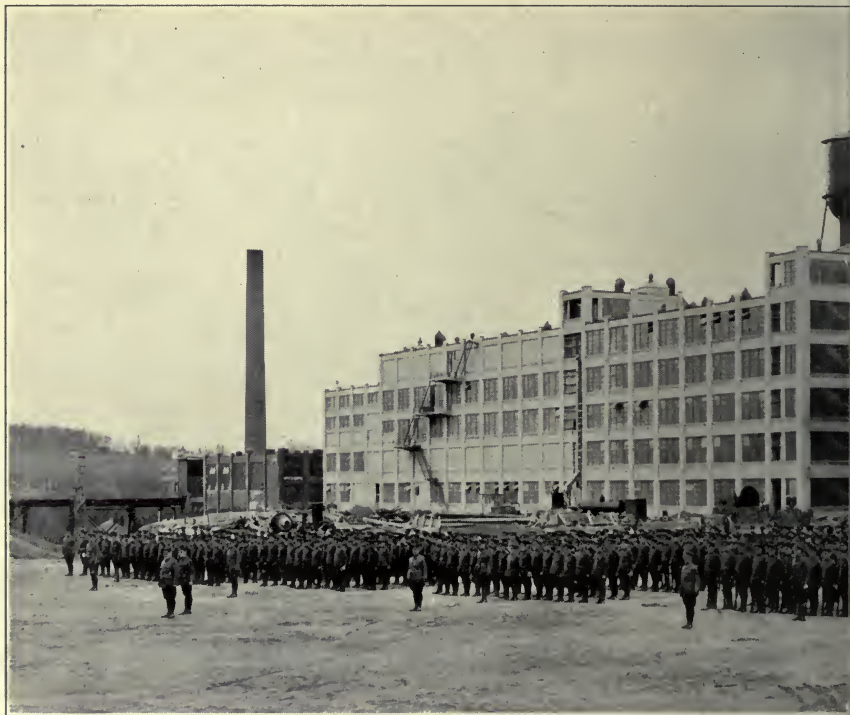
"Now suppose you decide to make a special run on a style of pictures at about \$2.00 per dozen. At 30% your overhead on

these pictures would be 60 cents a dozen, which is hardly in proportion to the charge against the other three styles of work. The simplest thing to do would be to figure a larger profit on such work which would necessitate an increase in the selling price or a decrease in the size of the print, the cost of the mount or some other economy in material, so long as the quality is not affected."

If war prices have made you think of these things—have made you look into *your* expenses and profits—have influenced you to secure a better understanding of the principles of business that insure profits, you will do well to apply them to your business. And there is no business principle that cannot be applied to photography to the ultimate good of the business.



Did you pay attention to what was said on pages 15 and 16 of the last number in regard to the use of the new Hydrochinon formula for developing papers? Successful use of that formula is dependent on strict observance of the precautions there stated, and seeing that your printer thoroughly understands.



AT KODAK

The photographic fraternity has shown such a lot of interest in our new factory at Kodak Heights, that we are sure our readers will be pleased to see the picture above, which shows the 127th Battalion C. E. F. on parade on the field north of the main line of buildings.

The 127th is a York County Battalion, to which we gave the use of Building No. 5 as a barracks, from the first week of April till they move to the Summer Camp, furnishing them with hot and cold water, shower baths, steam heat and other facilities—the boys think they have the coziest barracks in Canada.

No. 5 is the building on the right, behind the band and D Company, as they stand. Its dimensions are 280 x 85 feet, five stories high. This unit will comprise our stock and shipping departments, with two of the manufacturing departments in the three upper flats.



HEIGHTS

Adjoining No. 5 is No. 3, which is 460 feet long by 120 feet wide, and adjoining No. 3 is the Power Plant, indicated by the smoke stack. No. 3 will be the main manufacturing unit, housing the Film, Paper and Plate Making Departments.

In front of these large units will be several smaller buildings, of which the Executive Building will be the largest.

The Plant will front on Eglinton Avenue, the picture really showing the north line of the manufacturing units.

Kodak Heights is virtually complete, externally, though a great deal of machinery remains to be set up inside. Obviously, we would be ill advised to move in the busiest season, but we are planning to begin 1917 in our new home.

In a later issue we hope to show a picture of the Plant as a whole.

KEEPING UP TO THE MINUTE

Information is a valuable asset and it's one of the things that doesn't cost you anything. In fact, it is almost thrust upon you—but you can secure more of it with a little effort than by merely being passive.

All information is not immediately useful to you, to be sure, but you can't tell just what particular bit of information that you have stored away may come in handy to-morrow or the next day.

Such books of instruction as the Seed Booklet, Artura Results, Enlarging, Color Plates and Filters, etc., are revised at regular intervals and all the latest information regarding the subjects treated are included in the revised text. Also the most important changes in formula or working methods or information regarding new goods is usually to be found in *STUDIO LIGHT*, but the information in its condensed and complete form will most always be found in one of the booklets covering each particular line of goods.

Make it a point to have the latest editions of these booklets on file for reference. The date of revision will be found on the inside cover, or first page and your dealer will be glad to advise you whether or not there is a later edition.

PLATINUM PAPERS DISCONTINUED

The manufacture of all of our platinum papers was discontinued June 1st.

For several years the prices of platinum salts had been advancing and even before the outbreak of the war they were about double what they had previously been. At the present time platinum salts are worth over four times the former normal price. Our purchases of platinum made before and soon after the outbreak of the war have, however, enabled us to go along until the present time without raising the price of platinum paper. Our platinum customers have had the full benefit of our earlier purchases.

Paper stock, too, is costing more than it did and the present situation requires either a very large increase in the price of platinum papers, or else the discontinuance of their manufacture. We have decided on the latter course. With the present day quality of developing papers, particularly Artura, few platinum users would be likely to stand for the necessarily large advance in the price of platinum paper. This would mean that the volume of the business would be so cut down that the cost would still further enormously increase. Platinum paper can not be manufactured in the same depart-



SEED PLATE NEGATIVE, ARTURA PRINT

*By H. C. Watton
Oklahoma City, Okla.*



ment with the gelatine papers. It requires a department of its own and because of these facts it can no longer be made and sold except at a price that seems to us to be prohibitive. We wish we had the platinum in stock so that we could take care of our customers indefinitely at the old prices (we think we did pretty well in keeping them down for nearly two years), but the supply is now gone.



PRACTICAL SUGGESTIONS

IDEAS THAT HAVE BEEN TRIED
BY PHOTOGRAPHERS AND
FOUND TO BE USEFUL

When making up a solution from a written or printed formula, it is a good plan to write the entire formula on the label of the bottle. When this is done the formula is always at hand when a new solution has to be made. If the label is varnished with ordinary negative varnish it will last a long time.

It is very difficult to focus an interior when the light is weak. By oiling the ground-glass the brilliance of the image is increased by about four times and much of the difficulty is removed. When exposure is judged by the ground-glass illumination the increased brilliance must not be

forgotten in making the calculation.

Many photographers who have bought good anastigmat lenses stop them down to an unnecessary extent when using them for work other than portraiture. Stopping down to $f.45$ and $f.64$ may have been necessary with the older types of lenses but a much larger aperture may be safely used with the highly corrected lenses of to-day. An hour or two may be profitably spent in making a set of comparison negatives from the one original. When the results are compared it will be seen that the negatives taken at $f.16$ or $f.22$ are quite as good as those taken at the smaller apertures. The time taken in the experiment will soon be made up by the time saved in exposing with the wider aperture.

A small piece of bright metal may be prepared for photographing by holding it in the smoke of burning magnesium ribbon. The deposit of magnesium oxide dulls the surface and is readily cleaned off after the object is photographed.



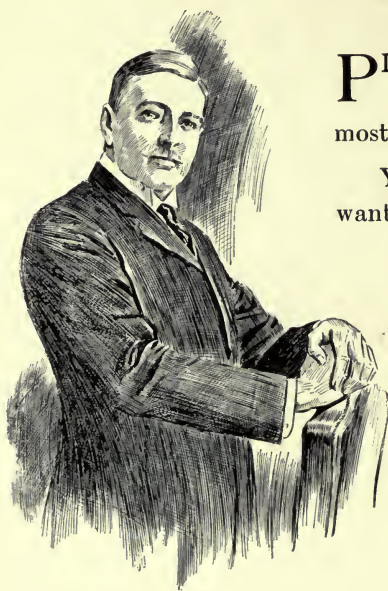
*Use C. K. Co. Tested
Chemicals and be certain
of your results.*



SEED PLATE NEGATIVE, ARTURA PRINT

*By H. C. Watton
Oklahoma City, Okla.*





PLEASING others is more than sentiment—it's almost an obligation.

Your family and friends want your photograph.

*Make the appointment
to-day*

THE PYRO STUDIO

No. 226. Price, 50 cents.

THE ONLY CONDITION

We make but one condition in our offer of cuts for the use of photographers.

It is obvious that two photographers in the same town would not care to use the same cut, and we are therefore obliged to limit this offer to one photographer in a town. It will be a case of first come first

served. The first order from a city will be promptly filled. Succeeding orders (if any) will necessarily be turned down and the remittance, of course, will be returned. It is also obvious that we cannot, on account of the cost of the drawings, furnish any large variety of cuts at the nominal prices quoted, and therefore can offer no substitute cut. Get your order in *first*. C.K.Co., Ltd.

BULLETIN: THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY FOR 1916



San Francisco, Cal. June 13, 14, 15

Portland, Ore. June 20, 21, 22

Seattle, Wash. June 27, 28, 29

Vancouver, B. C. July 4, 5, 6

Spokane, Wash. July 11, 12, 13

Minneapolis, Minn. July 18, 19, 20

VACATION



We know the chemicals are
right by rigid laboratory
tests—you know they are
right by the presence of
this seal on the container:



We are both certain.

Canadian Kodak Co., Limited,
Toronto, Canada

At your dealer's.

WANTED

OLD NEGATIVE GLASS

We will purchase Old Negative Glass, $4\frac{3}{4}$ x $6\frac{1}{2}$ and larger standard sizes, providing same is in good condition and packed carefully, in accordance with our instructions.

We will pay all the freight on shipments of 100 lbs. or more, except from localities where the freight rate exceeds \$1.00 per 100 lbs., in which case the shipper will be required to pay the excess.

Prices and further particulars will be furnished on application.

Canadian Kodak Co., Limited,

Toronto, Canada.

Department S.

Pyro is the *best* developer for Plates or Portrait Films—it is also, at present, by far the most economical developer.

Get acquainted with this chemical in its most convenient form



Eastman Permanent Crystal Pyro

It is clean to handle—gives off no flying particles of dust—yields negatives of the most perfect printing quality.

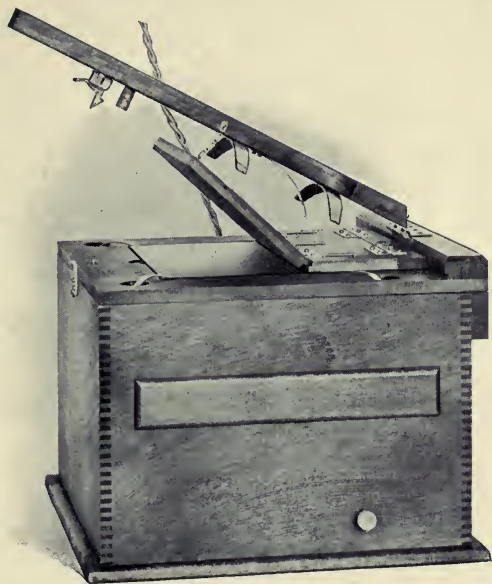
*Specify Eastman Permanent Crystal Pyro
in your next order.*

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

*A small
professional
printer as
substantial
and
convenient
as larger
printers—
and more
economical.*



The No. 1 Eastman Printer

should be a part of the equipment of every studio. It accommodates 5x7 and smaller negatives, the printing glass being 8x8 inches square. The printer is operated by a hand lever which operates the back and brings the paper in perfect contact with the negative before it switches the lights on and locks. Releasing the lever turns off the white lights but leaves the red light burning. Two 60 Watt Mazda lamps (not furnished) give ample illumination and the blocks on which they are mounted have a sliding and rack and pinion movement which permits of almost any adjustment of the light. A removable panel in the side of box permits a ground glass to be slid into grooves to diffuse the light. The printer is constructed of hard wood, and the best of metal is used for working parts, all of which are heavily nickered. The price, including ruby globe and electric cord with plug to fit any ordinary socket, \$10.00, f. o. b. Rochester.

CANADIAN KODAK CO., LIMITED,

All Dealers'.

TORONTO, CANADA.

The Eastman School
of
Professional
Photography

Will be held July 4th, 5th and 6th, at

DOMINION HALL

337 Pender Street

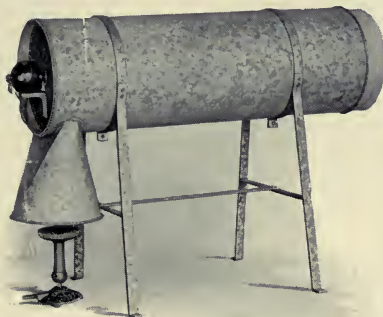
VANCOUVER

The 1916 School imparts information that you need, especially in commercial photography.

Come yourself and bring your assistants.

Improved Majestic Print Dryers

Save time, increase the efficiency of employees and insure the delivery of work when promised.



Improved Majestic Print Dryer No. 1

Prints for delivery, unmounted, loose mounted or in folders are properly shaped and bone dry in from 15 to 20 minutes.

The No. 1 Dryer has an 11-inch drying roll wound on a metal core inside of which fits a 7-inch roll. The large roll is for large and the small roll for small prints. The capacity of the two rolls is about 200 average size prints.

The No. 5 Dryer has five rolls, one 11-inch roll in the center and four 6-inch rolls around this. Its capacity is about 600 average size prints.

The No. 1 will dry from 1,600 to 4,000 prints—the No. 5 from 3,000 to 12,000 prints in a day, depending upon the use of extra rolls and the ability to keep them filled.

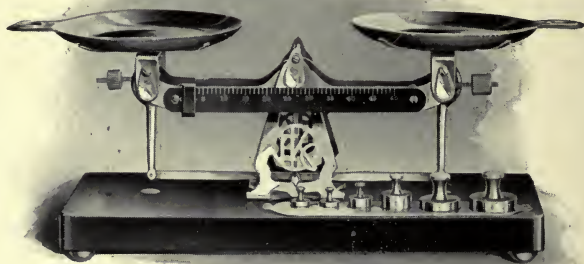
THE PRICE

Improved Majestic Print Dryer No. 1, complete with drying rolls, electric motor, fan, gas heater and stand	\$30.00
Improved Majestic Print Dryer No. 5, complete as above	60.00
Extra Drying Rolls, 11-inch, complete	3.00
" " " 7-inch, " 	2.50
" " " 6-inch, " 	2.25
Extra Muslin-Faced Blotter, for 11 or 7-inch rolls	2.20
" " " 6-inch rolls	1.60

CANADIAN KODAK CO., LIMITED,

All Dealers'.

TORONTO, CANADA.



Accuracy and convenience combined in the

Eastman Scale

Will weigh from one to fifty grains by a simple adjustment of a sliding weight on a beam—accurately tested weights from fifty grains to two ounces are used for weighing larger quantities.

All weights are plainly marked in grains as well as ounces or fractions of an ounce avoirdupois. All metal parts are nicked except the beam for weighing grains, which is black enameled with white markings. All bearings are of hardened steel and the balance has an extremely sensitive adjustment.

THE PRICE

Eastman Scale \$4.00

Canadian Kodak Co., Limited,

Toronto, Canada.

All Dealers'.

ARTURA CARBON BLACK

enables you to produce from small negatives large pictures, which render the qualities of the negative as faithfully as would contact prints. That's to your advantage.

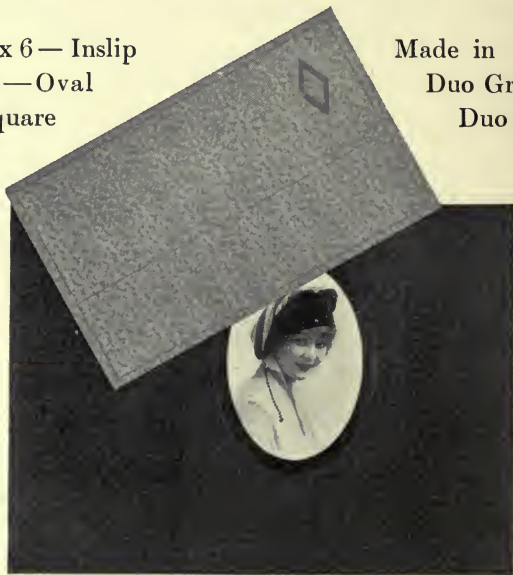
“Artura Results” gives detailed information about Carbon Black

Canadian Kodak Co., Limited,
Toronto, Canada.

THE ELLWOOD

For 4 x 6—Inslip
Prints—Oval
and Square

Made in
Duo Grey and
Duo Brown



The Ellwood, a folder that is entirely different from what you have been using, a folder you will have to see to appreciate its beauty and quality. This is without doubt the most attractive folder we have put out for your best grade work, and at a staple price. Insert and Cover Designs are entirely new and are brought up in Tint to combine with the rich tone of the stock, which when mounted produces a very harmonious effect. Be sure and see samples. We know the Ellwood style will please you.

Sample of One Size Mailed Free

MANUFACTURED BY

Canadian Card Co., Toronto, Canada.

OUR POLICY

Our business was established on a quality basis. It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

Our theory is that we can best serve ourselves by supplying our customers the best goods. Our acts have made this Theory a Policy, for we have not merely the desire to make the best goods but the means of converting that desire into a Reality.

In thirty years in the photographic business there have been several revolutionary changes. Doubtless there will be many more. Whatever they may be our Policy shall be to furnish (without following every mere will-o'-the-wisp) the very best of those goods which painstaking testing shall prove to be of benefit to our customers in the Simplification of Photographic Processes and the Advancement of the Art.

C. K. Co., LTD.



FROM AN ARTURA IRIS PRINT

*By Edward H. Weston
Tropico, Cal.*



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

ESTABLISHED 1901

ESTABLISHED 1906

VOL. 8

JULY 1916

No. 5

THE NATIONAL CONVENTION—CLEVELAND, JULY 24TH-29TH

If prospects count for anything prophecies are unnecessary. Secretary Hoffman informs us that on May 20th, ten weeks before the opening of the Cleveland National Convention, there were fifteen hundred and seventy memberships paid for this year, which is four hundred and seventy more than the Association had at the opening of the Indianapolis Convention last year.

Cleveland is a beautiful city—a good convention city, is centrally located and reduced railroad fares have been secured. Photographers are enjoying a good business and the 1916 Convention offers such a large number of educational, as well as entertainment features, that the attendance should be large.

The feature demonstrations in negative making will be by Mr. Edward Weston of Tropic, Cal.,

a home portrait demonstration by Miss Pearl Grace Loehr of New York, a demonstration of outdoor portraiture in one of Cleveland's Parks, by Mr. Clifford Norton of Cleveland, and a demonstration for commercial men by Mr. B. G. Heiser of Cleveland.

In addition to these there will be short demonstrations by the following well known, successful photographers: Miss Emme Gerhard, St. Louis, Messrs. John S. Schneider, Columbus, G. W. Harris, Washington, B. Frank Moore, Cleveland, J. Anthony Bill, Cincinnati, Chas. F. Townsend, Des Moines, Will H. Towles, Washington, Chas. Wallinger, Chicago, and Chas. L. Lewis, Toledo.

All of these photographers have been successful in their business and in the short informal demonstrations will show some one thing that has been of special value to them in their work.

Mr. Norton's demonstration will be the most unique one ever

given before a convention. It should also be one of the most interesting, for there are countless opportunities for out-door portraiture in connection with home portrait work, which is constantly growing in popular favor.

Mr. Carl Gist of St. Joseph, Mo., an expert air-brush worker, will demonstrate the finishing of prints and working in back-grounds, spending several hours each day in giving instruction in this work.

Professor Edward Lake, Instructor of Art at the University of Illinois, will lecture on art as applied to photography. His lecture before the Association at Indianapolis last year was exceptionally interesting, and those who hear him this year will find his talk of practical value.

There will be two advertising talks, one by Mr. L. B. Jones of the Eastman Kodak Company, on "Studio Advertising"—applying the broad principles of advertising to studio publicity, and Mr. Tim Thrift of the Multigraph Company, on "Direct-by-Mail Advertising."

Mr. C. H. Claudy, the well-known writer and lecturer, will talk on "The Photographer as a Business Man," while Mr. Anderson Pace of the Produce Terminal Exchange, Chicago, will talk on "Personality in Business." Mr. W. H. Bass of Indianapolis, one of the most successful commercial photographers in the

country, will talk to commercial photographers on "Building a Business," but his talk should be interesting to portrait photographers as well. None of these talks should be missed. Each topic will be ably handled by a man who is thoroughly acquainted with his subject and who will tell you things that will be of direct value to you in your business.

A Symposium and Question Box, under the leadership of D. E. Agler of Van Wert, Ohio, will be a very interesting feature and will bring up scores of questions that will be answered on the spot by drawing on the experience of all those present. Mr. Agler has a way of conducting such meetings that make them enjoyable as well as very instructive.

The Women's Federation will take care of the instruction in handling patrons, showing proofs and making sales, by furnishing several of the most successful receptionists in the country who will demonstrate their sales methods and answer all questions pertaining to the sales room of a studio.

Cleveland has excellent facilities for entertaining and this feature of the Convention will be very attractive. A reception and dance, a moonlight excursion on the lake and an all-day trip to Cedar Point, the Atlantic City of the Great Lakes, are the en-



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*By Edward H. Weston
Tropico, Cal.*



tainment features of greatest importance. They will make the Convention almost equal to a vacation and will enable those attending to combine business with pleasure.

The picture exhibit is open to every photographer in America. Three prints may be entered by each exhibitor in each of the following classes: Portrait, Commercial and Interpretative. Rating slips with the judges' explanations and suggestions will be returned with the pictures, to each exhibitor. The prints in the Portrait and Interpretative classes will be considered for Salon honors.

The commercial exhibit will be judged by W. H. Bass and B. G. Heiser, and the portrait and interpretative classes will be judged by Joseph Knaffl, Will H. Towles and G. Hamner Crough-ton. Exhibits must reach Ryland W. Phillips, 916 Schofield Building, Cleveland, Ohio, by July 17th. All exhibits received later will be returned unopened.

The space of the manufacturers' exhibits will be larger than at any previous convention and their displays will be of unusual interest. The convention hall has a floor space of sixty-five thousand square feet, so there will be no crowding even with the large attendance expected.

Make your arrangements to spend the week of July 24th in Cleveland—see the new things—

pick up a lot of useful information—meet your fellow craftsmen and have a thoroughly enjoyable time.



CANADIANS TO AT-TEND CLEVELAND CONVENTION

At a meeting of the Executive Board of the Photographers Association of Canada it was unanimously decided that owing to the present conditions of the country and in view of the fact that the P. A. of A. was to hold its convention at Cleveland, so close to Toronto, it would not be advisable to hold a Canadian convention this year. The secretary, Mr. Fred Booth, has notified the members to this effect and expects to have a large Canadian delegation in Cleveland.



Enlargements on

ARTURA CARBON BLACK

*retain the contact
quality.*



FROM AN ARTURA IRIS PRINT

*By Edward H. Weston
Tropico, Cal.*



OUR ILLUSTRATIONS

Our illustrations are examples of the work of Mr. Edward H. Weston of Tropic, Cal., who is to be one of the demonstrators at the Cleveland Convention this month.

Mr. Weston has selected these pictures for us as especially characteristic of his work and will, no doubt, show in his demonstration his methods of working and his ideas of composition, posing and lighting, which show an exceptional amount of originality.

Mr. Weston worked for two years as printer in a Los Angeles studio and then decided to go into business for himself. The "Little Studio," as he chooses to call it, was opened in Tropic, Cal., five years ago, the venture being against the advice of his friends, in and out of the profession.

For three years there was not even a street in front of the studio—a path answering all purposes—but enough of those who appreciated Mr. Weston's style of work found the path and each pilgrimage wore it plainer until now the "Little Studio" has become the rendezvous of artists, theatrical stars and tourists who appreciate things artistic and have heard of Mr. Weston and his work.

While his exhibits at the National and other photographic

conventions have received the honors that all photographers covet, the recognition his work received at the London Salon has helped most to bring Mr. Weston into the lime light of publicity.

The London Salon of Photography, held in the galleries of the Royal Society of Painters in Water Colors, is the leading yearly exhibit of pictorial photography. No awards are given, it being considered sufficient honor to have a picture hung. Five of Mr. Weston's pictures were hung in the last salon. And further, its honorary secretary stated it was, in his estimation, the best group of pictures by any one man.

This was a signal honor for Mr. Weston and it has placed him in the front rank of pictorialists.

A portion of Mr. Weston's exhibition and studio work has been made on E. B. Platinum and Bromide. A greater portion, however, is made on Artura, our illustrations being from an excellent set of Iris prints. There is a softness to these prints that is altogether different from fuzziness. And while our reproductions fail to do justice to the tone values of the originals, they give a very good idea of their decorative and pictorial quality and should be of unusual interest to our readers.





FROM AN ARTURA IRIS PRINT

*By Edward H. Weston
Tropico, Cal.*



WHY WRATTEN SAFELIGHTS ARE SAFE



Fig. 1

For comfortable working in the dark room one needs as much light as is consistent with safety, which means that the color and the amount of the illumination that can be used depend on two things—the sensitiveness of the plate and the sensitiveness of the eye.

Plates vary according to their kind, while of the 4 per cent. or less of people who do not possess normal vision, the majority are slightly deficient in their perception of red, a few have the opposite defect and to them red is irritating, while a few others are deficient in the perception of green or blue.

By passing a ray of white light through the spectroscope, we obtain a band of pure colors in the following order: Violet, blue, green, yellow, orange and red. This fact must be introduced to make any discussion of dark room illumination possible in even the most elementary scientific manner.

As we cannot show the spectrum in colors, we have drawn a diagram showing roughly the position of the colors as they appear in the spectrum (Fig. 1).

The second diagram shows

how the colors of the spectrum affect the eye when very bright and very weak lights are used. If you were to look at a brilliantly illuminated spectrum, the yellow or yellow-green would seem brightest to the eye, as shown by the upper curve in our diagram. It is also seen that the line falls away almost equally in the red and green, showing that these colors are equally bright to the eye while its lowest point is in the blue or the violet, showing that these colors are darkest to the eye.

Reduce the quantity of light and the relative brightness of the colors change as shown in the lower curve, green appearing brightest, while red, orange,

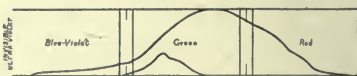


Fig. 2

yellow, blue and violet are all darker. This phenomenon is called the Purkinje effect, from the professor of that name who discovered it, and it must be considered if eye strain is to be taken into account in using a weak dark room illuminant.



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Tropico, Cal.*



On the other hand, all plates have the greatest sensitiveness to the violet-blue, though the orthochromatic or isochromatics have an additional sensitiveness to the green and yellow and the panchromatic is sensitive to all

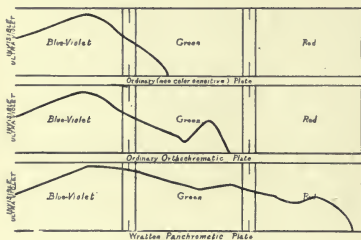


Fig. 3

colors. The diagrams (Fig. 3), show the sensitiveness of these plates to the spectrum, the height of the curves showing the proportionate effect of various colors. Actual photographs of the spectrum made on the three plates are shown in Fig. 4.

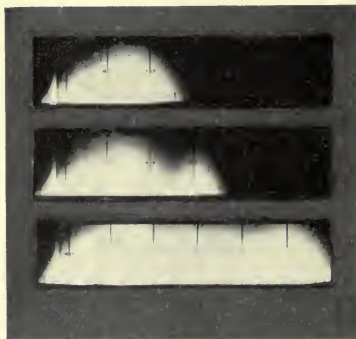


Fig. 4

Although the ordinary plate is most sensitive to blue, with sufficient exposure it is also sensitive to green, and with a very long exposure even to red, so it will be seen that no light can be made absolutely safe to work by for an indefinite time.

Because a plate is very sensitive, and the eye very insensitive to blue, this color cannot be used for a dark room light, as the smallest amount will cause fog. A green or red light may be used, or a mixture of green and red, that is, a yellow, though it would have to be a very deep yellow. But it must be clearly understood that there is no illumination at all that is absolutely safe for an indefinite time.

Until 1907 when Dr. C. E. K. Mees made an investigation of the subject, there were no dark room light standards. The photographer bought ruby or orange fabric or glass and was satisfied so long as he got no fog in his plates. He did not know whether he was getting as much light as it was possible to use with safety or not. In fact, dark room lights were much darker than they need have been. The photographer did not realize that he might have had much more light and worked in comfort with safety, but if he had known it such safelights were not then to be procured.

The standard of safety that Dr. Mees adopted allowed for a



FROM AN ARTURA IRIS PRINT

By Edward H. Weston
Tropico, Cal.



plate being exposed half a minute at three feet from the dark room lamp without showing any trace of fog, the lamp used being eight candle power when placed directly behind the safelight or sixteen candle power if the light did not come direct but was reflected through the safelight.

More light could be used if the plate was further away or was not exposed so long, while on the other hand if a less powerful light was used the plate could be exposed a longer time or nearer the lamp.

This standard was fixed for a plate in a dry condition. Of course development takes more than half a minute, but it is never necessary to expose the dry plate to so strong a light longer than this. Plates are usually removed from the holders by a dim light and development is not carried on in the direct rays of the light. As a plate is not so sensitive when wet the margin of safety allowed in the standard is materially increased.

It is necessary in a dark room to see, not only the plate but objects in the room as well. A diffused light is much better for this purpose than a direct light, objects in the room being readily distinguished with less strain on the eyes. This principle is applied to the Wratten Safelight Lamp, all the illumination, com-

ing through the safelight, being reflected light.

As a brighter safelight can be used with an ordinary plate than with a very rapid or an orthochromatic plate, it is obviously desirable to change the safelight as occasion demands, this being done instantly with the Wratten Safelight Lamps. Each of the Wratten Safelights has been designed in conformity with Dr. Mees' standard, allowing a good margin of safety for the work for which they are recommended.

The illustration following the description of each safelight shows at the top, a photograph of the spectrum made on the plate with which the safelight is to be used showing that part of the spectrum to which the plate is sensitive, and below another photograph of the spectrum on a Wratten Panchromatic plate with the safelight placed in front of it, showing the color of light which passes through the safelight.

As the Wratten Panchromatic plate is sensitive to all the colors of the spectrum, the lower illustration shows conclusively that the light which passes through the safelight is not of a color that will affect the plate with which the upper photograph was made.

Series O Safelight. A bright orange color suitable for use with Bromide paper and Lantern Plates. Fig. 5 shows the results of the spectrum photographs mentioned above.

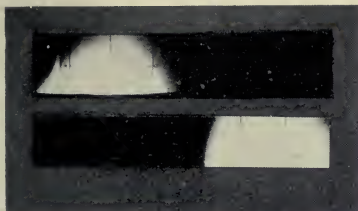


Fig. 5

Series 1 Safelight. An orange safelight for use with ordinary, medium and extra rapid plates which are not color sensitive. Fig. 6 shows the results of the spectrum photographs.

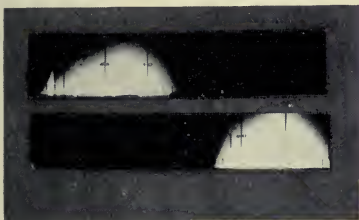


Fig. 6

Series 2 Safelight. A red safelight for extra rapid and orthochromatic plates which are sensitive to green but not to red. Fig. 7 shows the results of the spectrum photographs.



Fig. 7

Series 3 Safelight. This is a green safelight for use with the red-sensitive Panchromatic Plate. It gives a very faint illumination which appears to be quite strong as the eyes become accustomed to it. Fig. 8 shows the results of the spectrum photographs.



Fig. 8

The upper illustration shows the result of an exposure to the spectrum of less than one second on a Wratten Panchromatic Plate. The lower illustration shows the result of an exposure of over two hours on the same plate with a No. 3 Safelight in front of it, the light used being a 10 ampere arc lamp.

These safelights are made for the Wratten Safelight Lamps but may be used with any lamp that is light-tight and well ventilated. The Series 2 is the most generally used as it is safe for any plate except a panchromatic. The Series 4, a green safelight, may be used with ordinary plates by those who cannot use a red light. It is not safe for Orthochromatic Plates unless used with extreme care.



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Tropico, Cal.*





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Wratten Safelights are made by coating glass with stained gelatine, the dyes used being spectroscopically tested to make sure that they absorb the necessary colors and transmit as much as possible of the light of safe color. At the same time they must be permanent to light so they will not fade.

The Wratten Safelights are regularly furnished in three sizes at the following prices:

(ANY SERIES)

5 x 7	\$.60
8 x 10	1.20
12 x 15	2.25

A modified form of the Standard Wratten Safelight Lamp is described on page 27.



CLEAN THE TANK

Any tank continually used for developing will collect a corrosive substance which cannot be got rid of by ordinary washing. If allowed to remain this affects the developer, and the negatives are apt to be fogged, or stained and streaked around the edges. There need be no trouble of this kind with a tank if it is thoroughly cleaned at least once a month. The process is so simple that there is no excuse for a dirty tank. All you have to do is to make a solution of equal parts acetic acid and water, pour it into the tank, fasten the lid and shake well. This will clean the tank in a few minutes.

CAUSES OF WEAK NEGATIVES

Photographers sometimes get a batch of weak negatives, and very often are unable to discover the reason. It may arise from any one of three causes. Two of them—under-exposure on account of poor light and under-development on account of the developer being too cold—are unlikely at this time of the year. The third cause is one which is to be found summer and winter alike. It is the use of a developer containing chemicals which are below the proper strength.

If a formula has the proper proportions of pyro, sulphite and carbonate, either by weight or hydrometer test, and it gives weak negatives, do not try to get more density by increasing the amount of pyro. The probability is that the developer is lacking in carbonate.

As every professional knows, the function of carbonate in the developer is to act as an accelerator. It opens the pores of the gelatine and helps the reducing agent, pyro, to act more freely on the granules of silver which have been exposed to the light.

The plate-maker gives you a developer formula which assumes that carbonate of a certain strength will be used. Obviously when you use a carbonate which does not come up to this standard you alter the working



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of the developer. It is necessary to take into consideration the difference between the various brands of carbonate of soda. Two brands of carbonate might test the same when dissolved in water, but one would have a stronger alkaline reaction than the other. Many brands contain large quantities of bi-carbonate which, though helping to raise the hydrometer test, does not have an accelerating action in the developer. The hydrometer only shows the amount of solids in solution—the test has no value unless the nature of the solids is known. For this reason C. K. Co. Tested Carbonate of Soda, which must contain more than a certain high percentage of pure carbonate before it can pass the laboratory test, would not weigh more, nor test higher, than an equal quantity of carbonate containing impurities. The difference in the developing action, however, would be unmistakably shown in the negative.

There is probably no chemical which varies so much in the strength of different brands as carbonate of soda. C. K. Co. Tested Carbonate is uniform in strength and action, and its increasing popularity among professionals is undoubtedly due to this fact. By using C. K. Co. Tested Carbonate you remove the chief cause, at this time of the year, of weak flat negatives.

In nearly every photograph

process the strength and purity of the chemicals used are of as great importance as the strength of the carbonate in the developer. You can easily safeguard yourself by always using Kodak Tested Chemicals. They have to stand the most searching analytical tests in the Kodak laboratories because it is of vital importance to the Kodak Company that their plates and papers should be worked to the best advantage by their customers. It was to remove one of the chief causes of unsatisfactory results that the Kodak Company decided not to send out any chemical without a guarantee of its strength and purity. The sign of that guarantee is the C. K. C. Tested Chemical Seal.



A SIMPLE TEST

A simple test to discriminate between Sodium Sulphite and Sodium Carbonate is as follows: If a crystal of the salt is dissolved in a little water and a drop or two of sulphuric acid added to the solution, there will be a brisk effervescence, but there will be no smell to the gas that is given off if the substance is sodium carbonate. If it is sodium sulphite there may be a slight effervescence, but the liquid will smell strongly of sulphurous acid, the odor of a burning match.



FROM AN ARTURA IRIS PRINT

*By Edward H. Weston
Tropico, Cal.*





It's remarkable how children out-grow their smocks and frocks, their playthings, their childish ways, and—most of all—their photographs.

Only photographs will keep them as they are.

*Make the appointment
to-day*

THE PYRO STUDIO

No. 227. Price, 50 cents.

THE ONLY CONDITION

We make but one condition in our offer of cuts for the use of photographers.

It is obvious that two photographers in the same town would not care to use the same cut, and we are therefore obliged to limit this offer to one photographer in a town. It will be a case of first come first

served. The first order from a city will be promptly filled. Succeeding orders (if any) will necessarily be turned down and the remittance, of course, will be returned. It is also obvious that we cannot, on account of the cost of the drawings, furnish any large variety of cuts at the nominal prices quoted, and therefore can offer no substitute cut. Get your order in *first*. C. K. Co., Ltd.

BULLETIN: THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY FOR 1916



Minneapolis, Minn. July 18, 19, 20

VACATION

The 1916 Kodak Advertising Competition

\$3,000.00 CASH

*for pictures best illustrating
Kodak Advertising*

Can't *you* think of a picture that will help sell Kodaks, one that will forcibly illustrate the pleasures of photography? And can't you put your idea in a print?

The experience will be worth while and the ten prizes offered, ranging from \$1,000.00 to \$100.00, provide a generous incentive.

Write for circular giving full details.

Entries from Canada should be sent to the Canadian
Kodak Company, Toronto, Canada, before
October 20th, 1916.

EASTMAN KODAK COMPANY, Rochester, N. Y.

Of equal importance to you in securing results and to us in manufacturing sensitive material is the certainty of a standard strength and purity of the chemicals used.

Specify C. K. Co. Tested Chemicals and be certain of your results.



*Look for this seal on the
container.*

Canadian Kodak Co., Limited,
Toronto, Canada.

All Dealers'.

WANTED

OLD NEGATIVE GLASS

We will purchase Old Negative Glass, $4\frac{3}{4}$ x $6\frac{1}{2}$ and larger standard sizes, providing same is in good condition and packed carefully, in accordance with our instructions.

We will pay all the freight on shipments of 100 lbs. or more, except from localities where the freight rate exceeds \$1.00 per 100 lbs., in which case the shipper will be required to pay the excess.

Prices and further particulars will be furnished on application.

Canadian Kodak Co., Limited,
Toronto, Canada.

Department S.

Pyro is the *best* developer for Plates or Portrait Films—it is also, at present, by far the most economical developer.

Get acquainted with this chemical in its most convenient form



Eastman Permanent Crystal Pyro

It is clean to handle—gives off no flying particles of dust—yields negatives of the most perfect printing quality.

*Specify Eastman Permanent Crystal Pyro
in your next order.*

Canadian Kodak Co., Limited,
Toronto, Canada.

All Dealers'.

The Kodak Safelight Lamp



A modified form of
the Wratten Safe-
light Lamp.

Price, \$4.00

With one Safelight (5 x 7) of
any series desired.

Made of metal, brown outside, inside
white to intensify the reflection from the
electric bulb in the top.

Dimensions, $8\frac{3}{4}$ inches high, $7\frac{1}{8}$ inches
wide and 6 inches deep. Four feet of cord
furnished with socket, but no bulb.

*See page 14 and following for details
of the Safelights.*

Canadian Kodak Co., Limited,

Toronto, Canada.

At your dealers'.

Eastman Brilliant Velvet Bromide

is made to fit weak, flat negatives, from which it will give snappy black and white prints.

The semi-gloss surface, combined with the emulsion contrast, renders it especially useful to those who enlarge from amateur or landscape negatives.

Canadian Kodak Co., Limited,

Toronto, Canada.



Eastman Etching Knife

The blade has two broad cutting edges at the proper angle to allow the knife to be held in a natural and easy position while working. The cutting edges have just enough curve to do away with any probability of digging the negative with a sharp point, at the same time being flat enough to give all the cutting surface necessary. The handle is tapering towards the end where it rests against the hand, its flat surface preventing the knife from turning in the fingers. The blade itself is of the finest quality of steel and is set rigidly in the handle. The knife complete measures $5\frac{3}{4}$ inches and is enclosed in a stropping case which offers a means of keeping the cutting edge sharp at all times.

Price, \$1.00

Canadian Kodak Co., Limited,

Toronto, Canada

At your dealers'.

*There's a real advantage to
the photographer in using*

Artura Carbon Black

An emulsion of that *Artura* quality and uniformity that all others strive to attain. Coated on a wide range of surfaces, has speed enough to permit brief exposures with adequate control.

Sepia tones may be got quickly and regularly by simple re-development.

*If quality counts with you,
use Carbon Black.*

Canadian Kodak Co., Limited,

Toronto, Canada.

EASTMAN BROMIDE FABRIC

No. 1

Eastman Bromide Fabric, as its name implies, has a fabric base, on which is coated a Bromide emulsion, working in every way like a Bromide paper. The fabric is of a fine quality and as free from imperfections in weaving as is possible to obtain. It has approximately the same body and weight as a paper and should not be confused with the flimsy sensitized photographic cloth which is not coated with an emulsion. Eastman Bromide Fabric will stand a lot of abuse without cracking—in fact will last almost indefinitely. It makes an ideal medium for the photographic records of progressive work kept by Architects, Engineers and Contractors, and for salesmen carrying photographs of a line too bulky to carry with them, such, for example, as furniture. Eastman Bromide Fabric obviates the necessity of mounting such photographs on linen and is therefore less expensive. It has a beautiful matte surface and a fine texture and will be found valuable, not only for commercial work of the character described, but is especially suited for portrait prints which are to be oil colored. In fact, it can be used for almost any work which does not require a glossy surface. The manipulation is identical with that of Bromide.

PRICES

	DOZ.	$\frac{1}{2}$ GROSS	GROSS		DOZ.	$\frac{1}{2}$ GROSS	GROSS
5 x 7	\$.45	\$ 2.30	\$ 3.75	10 x 12	\$1.25	\$ 7.45	\$14.05
5 x 8	.50	2.50	4.25	11 x 14	1.70	9.80	18.00
3½ x 12	.50	2.70	4.55	12 x 15	1.90	11.40	21.15
6 x 8	.55	3.15	5.50	14 x 17	2.50	14.90	28.15
6½ x 8½	.65	3.55	6.25	16 x 20	3.45	19.55	37.50
7 x 9	.75	3.95	7.05	17 x 20	3.65	20.75	39.90
7½ x 9½	.80	4.55	8.25	18 x 22	4.25	25.00	48.45
8 x 10	.90	5.15	9.40	20 x 24	5.00	29.70	57.80

10 foot rolls, 34 inches wide . . . \$ 3.65

10 yard rolls, 34 inches wide . . . 10.65

Canadian Kodak Co., Limited,

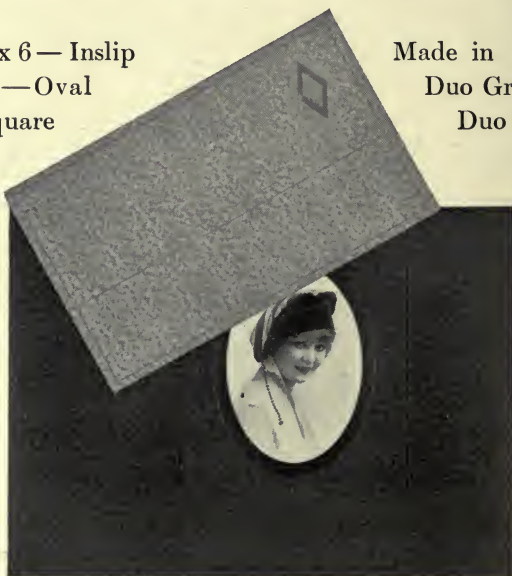
Toronto, Canada

At your dealers'.

THE ELLWOOD

For 4 x 6 — Inslip
Prints—Oval
and Square

Made in
Duo Grey and
Duo Brown



The Ellwood, a folder that is entirely different from what you have been using, a folder you will have to see to appreciate its beauty and quality. This is without doubt the most attractive folder we have put out for your best grade work, and at a staple price. Insert and Cover Designs are entirely new and are brought up in Tint to combine with the rich tone of the stock, which when mounted produces a very harmonious effect. Be sure and see samples. We know the Ellwood style will please you.

Sample of One Size Mailed Free

MANUFACTURED BY

Canadian Card Co., Toronto, Canada.

OUR POLICY

Our business was established on a quality basis.

It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

Our theory is that we can best serve ourselves by supplying our customers the best goods. Our acts have made this Theory a Policy, for we have not merely the desire to make the best goods but the means of converting that desire into a Reality.

In thirty years in the photographic business there have been several revolutionary changes. Doubtless there will be many more. Whatever they may be our Policy shall be to furnish (without following every mere will-o'-the-wisp) the very best of those goods which painstaking testing shall prove to be of benefit to our customers in the Simplification of Photographic Processes and the Advancement of the Art.

C. K. Co., LTD.



FROM AN ARTURA IRIS PRINT

*By Clarence Stearns
Rochester, Minn.*



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

ESTABLISHED 1901

ESTABLISHED 1906

VOL. 8

AUGUST 1916

No. 6

KNOW YOUR FIXING BATH

One can't become too intimately acquainted with the peculiarities of the ordinary acid fixing bath, especially during the hot summer months. There is no better, cleaner-working fixing bath for developing-out papers, and there is no one photographic solution that is more abused. As a consequence a large portion of the ills to which a photograph is heir may be traced to the fixing bath.

The acid fixing bath keeps the print hard and firm, stops development immediately, prevents developer stains and fixes the print if the bath is properly made and is in good condition.

One of the principal causes of trouble is the worn-out bath which remains clear even after it has been used for as many prints as the hypo in the solution can be depended upon to fix thoroughly. Sixty-four ounces of the

regular Artura Fixing Bath should never be used for more than the equivalent of two gross of cabinet prints which would be approximately six dozen 8 x 10 prints. This does not apply to Artura alone but to all developing-out papers.

Nothing is more uncertain than an improperly fixed print. It attacks your reputation in an underhanded way—stabs it in the back, as it were—and you learn of the injury too late to use first aid measures. The print may look all right when it leaves your hands, but after the customer has had it for some time it begins to look sick.

The highlights yellow first and if it has had very little fixing the entire print may discolor. Keep an account of the number of prints your bath has fixed and make a fresh solution as soon as it nears the danger point, which should be while the bath is perfectly clear.

There are many other causes

of trouble, the first of which may be in compounding the bath. The most approved method is to make a stock solution of hardener and make up a fresh fixing bath every day or for every batch of prints.

STOCK SOLUTION OF HARDENER

Water	80 ozs.
C. K. Co. Sulphite of Soda .	16 ozs.
No. 8 Acetic Acid (28% pure)	48 ozs.
Powdered Alum	16 ozs.

Dissolve the chemicals in the order named.

We do not say "Dissolve the chemicals in the order named" from force of habit but with very good reason. If the alum is added to the sulphite *before* adding the acid a precipitate of aluminium sulphite is formed which it is very difficult to again get into solution. Be sure the sulphite is thoroughly dissolved, *then* add the 28% acid and *then* the alum.

Some photographers prefer to dissolve the sulphite in half the water and the alum in the other half, but in compounding, the acid must always be added to the sulphite before the alum.

To make the fixing bath, dissolve 16 ounces of hypo in 64 ounces of water and when sure the hypo is thoroughly dissolved, add 8 ounces of the above hardener. If the hypo is not thoroughly dissolved the addition of the hardener is liable to make the bath milky. The bath should be clear, and if not, it is an indication that sulphur has been released, and with sulphur released the solution becomes a

toning bath as well as a fixing bath.

The addition of any acid (with the exception of sulphurous) to plain hypo will release sulphur. Alum will do the same but not in the presence of Acetic Acid and Sulphite of Soda. The alum is the hardening agent, the acetic acid is the clearing agent and arrestor of development, the sulphite of soda in combination with acetic acid is the preservative, so it is readily seen that the one-solution acid fixing bath answers a three-fold purpose.

Prints could be developed, rinsed in a short stop and clearing bath of acetic acid, fixed in plain hypo and hardened in an alum bath, but the acid fixing shortens the operation and does the same thing better.

The chemical action of sulphite of soda and acetic acid in preventing the formation of sulphur is due to the fact that any sulphur which is formed combines with the sulphite to form hypo. In fact, hypo is prepared commercially in this way by boiling together sulphite of soda and sulphur. If sulphur has already been precipitated in the fixing bath, further addition of sulphite of soda will not dissolve it (or re-form it into hypo) as a cold solution of sulphite of soda is only capable of dissolving sulphur which is about to be precipitated and which at this stage is in a very finely divided condition.



FROM AN ARTURA IRIS PRINT

*By Clarence Stearns
Rochester, Minn.*



Practically all the trouble encountered with the acid fixing bath is due to the releasing of sulphur and its consequent action on the print that is being fixed.

Impure sulphite of soda, old sulphite or sulphite that has been exposed to the air will contain considerable sulphate, which has no action as a preservative. If such soda is used in making a bath and it becomes milky it is due to a lack of sufficient *pure* sulphite.

Sulphite of soda oxidizes even more readily in solution than in its dry form, so the hardener should be kept in a bottle tightly corked, and the prepared fixing bath should be poured into a bottle if it is to be used a second time. Oxidation will destroy a bath that has never been used if it is allowed to stand in an open tray for some time.

Heat will also cause sulphur to be released from the hypo even though a bath has been properly prepared, so it is safest to make the fixing bath only for immediate use in hot weather.

It is as important to wash prints thoroughly after fixing as it is to fix them properly. Prints should be kept separated in the wash water to allow the fixing solution to be thoroughly eliminated from the emulsion. If prints lie matted together in warm water they may begin to tone in spots, or if they are removed from the water before the hypo has been entirely eliminat-

ed any portion of the print containing hypo may turn brown after the prints have been laid out to dry.

Acetic Acid No. 8 (28% pure) is specified in our formulas because it is the proper strength for the fixing bath and may be procured at any photographic supply house. You may be depending upon your local source of supply for acids, in which case it is just as well to use Glacial Acetic 99% pure, provided it is properly diluted before it is added to your other chemicals. To make a 28% solution add 3 ounces of 99% acid to 8 ounces of water.

This dilution of the glacial acid is important, otherwise an excessive amount of sulphur dioxide gas would be given off from the sulphite even though only an equivalent quantity of strong acid was employed.

Knowing the action of the acid fixing bath and taking proper precautions to prevent sulphurization will ensure permanent prints even in the hottest weather. And with a stock solution of hardener it is certainly very easy to dissolve sixteen ounces of hypo in sixty-four ounces of water and add eight ounces of the hardener. There is really no excuse for fixing bath troubles either in summer or winter if we will familiarize ourselves with the above facts and keep the precautions constantly in mind.



FROM AN ARTURA IRIS PRINT

*By Clarence Stearns
Rochester, Minn.*



SELECTING A LENS TO FIT YOUR STUDIO

The man who is opening a new studio or who thinks of buying a new lens for the old studio is often at a loss to determine the length of focus the lens should have to suit his needs best.

Short focus and long focus lenses both have advantages, but, as a rule, the longest focus lens that can be used for the work it is required to do is the lens that will produce the most satisfactory results.

Tables are published to help in the selection of lenses, but such tables are sometimes confusing, and as the rule by which the calculations are made is not published the photographer can not very well work out his own problem.

A lens is often used for standing figures as well as bust portraits, but the calculation can be made so accurately that the lens of proper focal length for any working distance that may be convenient or practical for the photographer to use, may be determined. And it can also be determined at exactly what distance the lens used for full figures must be from the subject for a three-quarter length or head and shoulder image of any size.

Such calculation saves the trouble of ordering a lens and finding, on trial, that it does not meet with requirements. The

things you must know in selecting a lens are the greatest distance, lens to subject, at which you can work conveniently and the relative size of the subject to the image you wish to secure in your negative.

If your operating room is thirty feet long and your skylight is so arranged that you must place your subject six feet from the end wall to secure the proper lighting and allow sufficient space for your background, your working space is reduced to twenty-four feet. Allowing another six feet for your camera, and the operator behind the camera, reduces the actual working space to eighteen feet.

Suppose the average subject you photograph is five feet five inches tall and you wish to make a full figure picture having the image five inches high in your negative. To determine the focal length of the lens that will meet these conditions the working distance is divided by the number of diameters reduction, plus one. To find the number of diameters reduction, divide the height of subject by the height of the image you wish.

Height of subject, 65 inches, divided by height of image, 5 inches, equals 13, plus 1 equals 14. And working distance, 216 inches, divided by 14 equals $15\frac{3}{7}$ inches, which is the exact focal length the lens should be.

In round figures a 15 inch



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Rochester, Minn.*



focus lens would come well within the requirements of conditions stated in this example. A 16 inch lens would require 18 feet 8 inches space and might crowd the operator a trifle. To find the working distance when the focal length is known, multiply the diameters reduction plus one by the focal length.

The 15 inch lens would be excellent for three-quarter figures and head and shoulder work but might not be so good for groups, considering the limited working space. If, however, the lens would cover a $6\frac{1}{2} \times 8\frac{1}{2}$ plate, a group could be made in which the images would be the same size and the working distance the same as for single figures.

A lens suitable for groups may be selected by finding the width of the space the group will occupy under the skylight and dividing this by the width of space the image should occupy on a plate of any size. The result is the reduction in diameters, and the calculation can be made the same as for a single figure.

While this rule may not be useful to you at the time of reading it may come in handy at some later time and should be filed with similar information for future reference.



An Eastman Timer will repay its cost several times over in one month in the paper it saves from the waste basket.

SMALL TOWN ADVERTISING

One hears a great deal of argument to the effect that it doesn't pay to advertise in a small town—a town of five or six or seven thousand because everyone knows the photographer. You would almost think the photographer was personally acquainted with that number of people—but even if he is, he cannot solicit business—cannot tell each one of those people they should have photographs made unless he does it by advertising.

No matter how well you may be known, how popular you are socially, you must keep hammering away at your advertising of photographs—must keep telling people they should *be photographed and why they should be photographed*, if you are going to make business.

The doctor profits most when there is an epidemic. He can't do anything to start one, but *you can* do a lot of things to start a real epidemic of photography. It is quite ethical in your business, and the desire to have portraits made can be created if you are a good advertiser and your advertising is of a nature to shape the mind of the public in your particular community.

I have seen localities where it was a hard matter to find someone who could direct you to the local photographer and I have



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Rochester, Minn.*



seen other places where the photographer seemed to be about the most important person in the community. In the latter case, the man advertised.

I have one case in mind where a man opened a tent studio in a small town ten years ago, with a \$20.00 gold piece for his capital. Two years ago he built a \$15,000.00 studio, and it is a paying investment. This is the Bisbee Studio of Twin Falls, Idaho, a town with a population of about 6,000.

The question always asked about small town advertising is, "How should I advertise and how much money should I spend?" And it is almost as hard to answer such questions as it would be for a doctor to treat a sick man without an opportunity to diagnose his case.

A business that is not advertised must be sick, or at least is not as healthy as it might be. If you had been sick all your life you wouldn't know just how it felt to be well, and it's the same with a good many businesses. You don't know how much better your business will be with the right kind of advertising, and if you have advertised without satisfactory results it is a certainty that the advertising was not of the right sort.

The studio mentioned above is spending \$50.00 a month for 1916 publicity. That may seem a little strong for the average

studio in a town of 6,000, but if it brings proportionate results, the larger the better. Mr. Bisbee says: "We are very enthusiastic about our advertising. The people like our ads and they bring us fine returns."

A great many people look at advertising as an expense. Some of it is, no doubt, but good advertising can only be looked upon as an investment. If you buy a small studio for a couple of thousand dollars, it is an investment and must return you interest in the form of a net profit which determines whether or not it is a good investment. And if you can invest a certain amount of money in advertising and increase the business the studio has been doing, the advertising is a good investment so long as the increase in profit is greater than the cost of the advertising.

Even good advertising, however, will not bring you big results the day after it appears in your paper. You must give it time to soak in, and keep it up until it starts business your way and then advertise some more to keep it coming, once it has started.

It is good advertising to get people into your studio. It reminds them of pictures and may lead to a sale. But don't invite a lady to come into your studio for a drink of cold water and then try to sell her photographs. The following text which appeared with a good white margin around



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it, is a good example of indirect advertising:

"No matter how jolly the Fourth of July celebration, the babies are likely to be fretful before it is over. Even grown people are tired and thirsty when the dust is thick and the day is hot.

So we'll have water—it's filtered—on ice all day and you may be sure the drinking glasses are thoroughly washed after each using.

Or if you just want a quiet corner and magazine—or if you want to wait for your friends—

Or perhaps you want to heat milk for the baby. We have an electric plate and can do it so quickly for you. It's no trouble at all.

Our dressing room, fully appointed, was built for the public. Every day some one finds it convenient. So many people have said of it: 'How immaculate!' It's not just that, perhaps, but it is as clean as hands can make and keep it in Idaho. It's for you."

THE BISBEE STUDIO

Such an advertisement in a small town paper creates interest in a studio, excites the curiosity of those who have never visited it and indirectly creates a desire for photographs. And if the reader should find occasion to take advantage of any of the courtesies extended in that advertisement and finds they are real—that the offer is made in good faith—and is kindly treated and not importuned to buy, that person will go to that studio when a photograph is wanted.

This same studio sends out a neatly printed card to each school graduate which reads:

COMMENCEMENT GREETINGS

Good wishes for your future success.

Congratulation upon your graduation.

From
The Bisbee Studio.

This card is well printed and is enclosed in a plain envelope inside a mailing envelope. Another piece of good advertising issued by this studio is a "Baby Book," a copy of which is presented to the baby when its first photograph is made.

A Christmas Tree is placed in the studio each year and the children are invited to come to see it, special window displays are made and advertised, billboards are used at different seasons, and so this studio is always kept fresh in the minds of the public.

There are so many opportunities for the small town photographer to advertise and they depend so much on local conditions, that it is not possible to give advice other than of a general nature. Newspaper advertising is good because you can select the paper that reaches the people you wish for customers and can know its circulation. And people read newspaper advertising—especially the women. Advertising in souvenir programs of church or

lodge affairs or similar mediums is practically worthless and should not be charged to an advertising account. If you allow yourself an advertising appropriation, make every cent of it count.

There is one other bit of good advice that every new advertiser should remember for it will save a lot of money. Never make a claim for your work that isn't altogether true. Never make a statement that you can't or don't intend to back up, and never say you make the best work in town or in any other way indicate that you have a competitor. If you do, you will advertise him rather than yourself. The following is a good example of an advertisement you can use if you can give the percentage truthfully, but it would be bad advertising if twenty or thirty per cent. of your customers asked for re-sittings or if you did not make re-sittings cheerfully.

Often a new customer, paying the first deposit at the time of the sitting, will say to us; "But if I don't happen to like my proofs, what then?" And we always answer, "Then you may come for a re-sitting; you may come again and again, if you wish, and there will be no extra charge. Our aim is to please you."

We have kept a faithful account of resittings and this is the data, not for a week, or for a month, but for a whole year; ninety-eight out of every hundred were highly pleased with the proofs first submitted; only two per cent. asked

for re-sittings. That's our record for 1915; we are very, very proud of it.

THE BISBEE STUDIO.

1916 will be a good year.

Mr. Bisbee has made a large success in a small town. He has not only been a steady advertiser but a high grade advertiser. He has put quality into his publicity and has backed that up by putting quality into his work—and sticking to quality in his materials. He is a consistent user of Seed Plates and Artura Paper.



ARTURA DEVELOPER POWDERS

We are now in a position to supply Artura Developer Powders, Nos. 1 and 2 in quantities which we believe will be sufficient to fill normal requirements. These powders are for professional use only, are compounded with the same care and from the same chemicals as previously and will produce the best of results on Artura and Azo papers.

We also believe that these developer powders will be found more economical than any developer on the market that will produce similar results and we recommend them to safeguard the quality of results these papers are capable of producing.

For Azo paper the developer is prepared the same as for Artura Iris, the No. 1 powder making



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Rochester, Minn.*





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*By Clarence Stearns
Rochester, Minn.*



eight ounces of developer and the No. 2 powder, sixteen ounces. The price of the No. 1 powder per box of six cartridges is 35 cents and the No. 2 powder per box of six cartridges, 70 cents, at your dealer's.



OUR ILLUSTRATIONS

Our illustrations this month are from the studio of Mr. Clarence Stearns of Rochester, Minnesota. Mr. Stearns is very popular in the Northwest, having been a traveling man in that territory for a number of years.

Since opening his studio in Rochester he has taken an active interest in association affairs, serving one year as president of the Northwestern Association and guiding its affairs through a very successful convention.

Mr. Stearns used very good judgment in locating in Rochester for, while a small town, it has the unusual advantage of having a well-to-do transient population. It is the home of two of the greatest surgeons in the world, and while it might seem at first thought that this would not be a material benefit, it really is.

Aside from the thousands who journey to Rochester every year to consult these great surgeons, there are also hundreds of other surgeons (and they come from all

parts of the world) who attend the clinics in the great Rochester hospital.

The difficulty in securing the business of a transient population of this nature can only be overcome by the most effective kind of advertising. And this, it seems, Mr. Stearns is doing in a very successful manner.

The remark, quite often made, that he is an exceptionally good business man as well as an artistic photographer, pleases Mr. Stearns more than all other compliments. He is entirely devoid of ego, however, and his natural modesty has never been known to leave him.

His hobby runs to Oriental curios, a number of beautiful pieces of bronze, porcelain and carved wood, which are quite valuable because of their age and origin, being used in the decoration of his studio. It is a modern studio in every respect and was opened only a little over two years ago, so the excellent business has been entirely the result of Mr. Stearns' efforts to produce work of the highest quality and to consistently advertise photographs to the buying public.

Our illustrations are from Artura Iris prints, Artura being the paper used exclusively for portrait work in this studio.



It's a Seed Plate you need.



FROM AN ARTURA IRIS PRINT

*By Clarence Stearns
Rochester, Minn.*



STAINS ON HANDS— AVOIDING AND REMOVING

Some photographers who use pyro developer continually, never have stained fingers, while others have hands so badly stained, it would seem they could never be rid of it. The best thing to do is to prevent the stain and always have the hands clean and slightly.

It is claimed that this can be done with water alone, if the following precautions are observed: Never dip dry fingers in the developer. Always have the hands wet and rinse them under a running tap before and after placing them in the developer and after having them in the hypo. Once the plates are in the developer it is just as easy to develop with wet hands as dry ones, though most people have a habit of drying their hands every time they rinse them. This habit is responsible for most of the staining, as fingers are more susceptible to the stain when dry.

Another preventive which is frequently used by those who are careful of the appearance of their hands is a weak acid rinsing solution, one ounce of hydrochloric acid to fifty ounces of water. A bowl or dish of this weak acid solution is placed beside the developing tray and the fingers rinsed frequently before and after being in the developer.

To remove stain that has ac-

cumulated on the hands and nails is more difficult if it has been there for a long time. The method we use is a simple one and it is very effective. The stain remover consists of two solutions made as follows: No. 1, one-half ounce Permanganate of Potash to fifty ounces of water, and No. 2, twenty-five ounces Bisulphite of Soda to fifty ounces of water. Rub the hands with a small amount of the No. 1 solution until a dark permanganate stain has been formed wherever there is a pyro stain. Then rinse the hands with the No. 2 solution, which will remove both the permanganate and pyro stains.

It must be remembered that permanganate is a poison and should be used with the same care as is used in handling a reducing solution.

Of course, it is better to prevent the finger stains and so do away with the idea that the photographer must necessarily bear such an unsightly mark of his profession, but if one can not form the habit of preventing stained fingers, he can at least resort to the remedy and remove the stains as often as desired.



*Specify C. K. Co. Tested
Chemicals and be certain of
the strength and quality of
the chemicals you use.*



FROM AN ARTURA IRIS PRINT

*By Clarence Stearns
Rochester, Minn.*





BABY'S friends
and your friends
can buy anything
you can give them—
except your photo-
graph.

*Make the appointment
to-day*

THE PYRO STUDIO

Cut No. 228. Price, 50 cents.

THE ONLY CONDITION
We make but one condition
in our offer of cuts for the use of
photographers.

It is obvious that two photogra-
phers in the same town would not
care to use the same cut, and we are
therefore obliged to limit this offer
to one photographer in a town. It
will be a case of first come first

served. The first order from a city
will be promptly filled. Succeeding
orders (if any) will necessarily be
turned down and the remittance, of
course, will be returned. It is also
obvious that we cannot, on account
of the cost of the drawings, furnish
any large variety of cuts at the
nominal prices quoted, and therefore
can offer no substitute cut. Get
your order in *first*. C. K. CO., LTD.

BULLETIN: THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY FOR 1916



Milwaukee, Wis.	September 5, 6, 7
Pittsburgh, Pa.	September 12, 13, 14
Albany, N. Y.	September 19, 20, 21
Washington, D. C.	September 26, 27, 28
Knoxville, Tenn.	October 3, 4, 5



Of equal importance to you in securing results and to us in manufacturing sensitive material is the certainty of a standard strength and purity of the chemicals used.

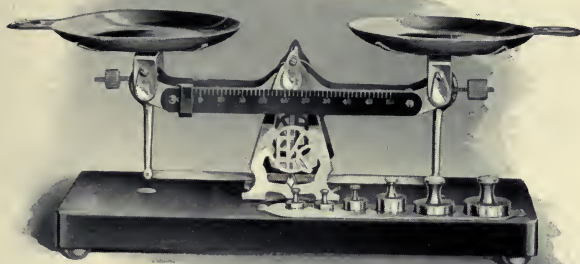
Specify C. K. Co. Tested Chemicals and be certain of your results.



*Look for this seal on the
container.*

Canadian Kodak Co., Limited,
Toronto, Canada.

All Dealers'.



Eastman Scale

An avoirdupois scale that you can be sure is accurate, that has no small weights to lose or misplace and that permits you to secure the correct weight, quickly and conveniently.

The beam with the sliding weight is the feature which simplifies the working of this scale. The large weights are marked in ounces or fractions of ounces and in grains as well. Place the weight which comes nearest to the proper amount in the right hand pan, slide the weight on the beam to the number of grains which will make up the exact amount and place chemicals in left hand pan.

The scale is made of the best material—the beam is black with plain white markings, all other metal parts being nickel-plated—all bearings are of hardened steel, and the balance adjustment is extremely sensitive.

THE PRICE

Eastman Scale \$4.00

Canadian Kodak Co., Limited,
Toronto, Canada.

All Dealers'.

WANTED

OLD NEGATIVE GLASS

We will purchase Old Negative Glass, $4\frac{3}{4}$ x $6\frac{1}{2}$ and larger standard sizes, providing same is in good condition and packed carefully, in accordance with our instructions.

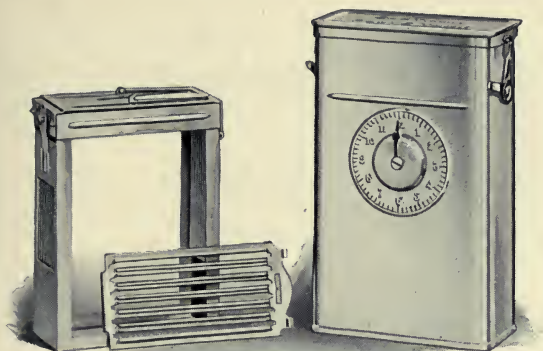
We will pay all the freight on shipments of 100 lbs. or more, except from localities where the freight rate exceeds \$1.00 per 100 lbs., in which case the shipper will be required to pay the excess.

Prices and further particulars will be furnished on application.

Canadian Kodak Co., Limited,

Toronto, Canada.

Department S.



In hot weather

The Eastman Plate Tank

insures a better and more uniform quality of negatives because it maintains the developer at an even temperature—produces cleaner negatives because the air and light-tight tank prevents fog and obviates the necessity for handling—and makes developing a comfort because it reduces hours of work in a stuffy dark-room to the actual time necessary for loading and unloading the tank.

Canadian Kodak Co., Limited,

Toronto, Canada.

All Dealers'.



Eastman Etching Knife

The blade has two broad cutting edges at the proper angle to allow the knife to be held in a natural and easy position while working. The cutting edges have just enough curve to do away with any probability of digging the negative with a sharp point, at the same time being flat enough to give all the cutting surface necessary. The handle is tapering towards the end where it rests against the hand, its flat surface preventing the knife from turning in the fingers. The blade itself is of the finest quality of steel and is set rigidly in the handle. The knife complete measures $5\frac{3}{4}$ inches and is enclosed in a stropping case which offers a means of keeping the cutting edge sharp at all times.

Price, \$1.00

Canadian Kodak Co., Limited,

Toronto, Canada

At your dealers'.

The Kodak Safelight Lamp



A modified form of
the Wratten Safe-
light Lamp.

Price, \$4.00

With one Safelight (5 x 7) of
any series desired.

Made of metal, brown outside, inside
white to intensify the reflection from the
electric bulb in the top.

Dimensions, $8\frac{3}{4}$ inches high, $7\frac{1}{8}$ inches
wide and 6 inches deep. Four feet of cord
furnished with socket, but no bulb.

*A reliable lamp at a price within
the reach of all.*

Canadian Kodak Co., Limited,
Toronto, Canada.

At your dealers'.

Eastman Brilliant Velvet Bromide

is made to fit weak, flat negatives, from which it will give snappy black and white prints.

The semi-gloss surface, combined with the emulsion contrast, renders it especially useful to those who enlarge from amateur or landscape negatives.

Canadian Kodak Co., Limited,

Toronto, Canada.

THE luxuriously appointed studio employs Century Apparatus. Its rich finish and dignified efficiency harmonize perfectly with the most refined surroundings.

THE less pretentious studio *needs* Century equipment to dispel any feeling of uncertainty on the part of its patrons. In no other business is the buyer brought into contact with the mechanism for turning out the finished product.

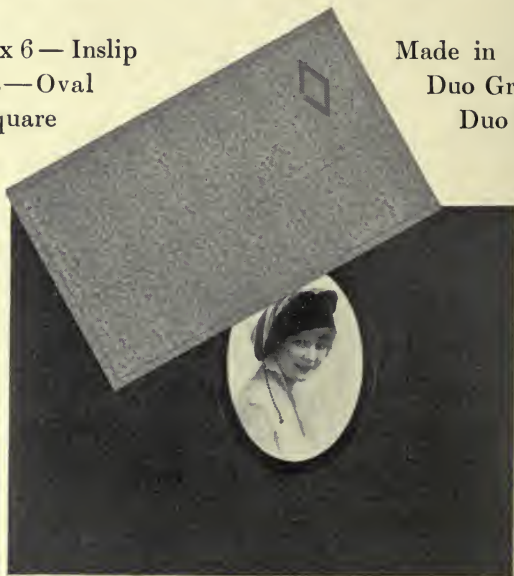
WITH Century Apparatus your customers see that you have the best.

CENTURY CAMERA DIVISION
EASTMAN KODAK CO.
ROCHESTER, N. Y.

THE ELLWOOD

For 4 x 6 — Inslip
Prints—Oval
and Square

Made in
Duo Grey and
Duo Brown



The Ellwood, a folder that is entirely different from what you have been using, a folder you will have to see to appreciate its beauty and quality. This is without doubt the most attractive folder we have put out for your best grade work, and at a staple price. Insert and Cover Designs are entirely new and are brought up in Tint to combine with the rich tone of the stock, which when mounted produces a very harmonious effect. Be sure and see samples. We know the Ellwood style will please you.

Sample of One Size Mailed Free

MANUFACTURED BY

Canadian Card Co., Toronto, Canada.

OUR POLICY

Our business was established on a quality basis. It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

Our theory is that we can best serve ourselves by supplying our customers the best goods. Our acts have made this Theory a Policy, for we have not merely the desire to make the best goods but the means of converting that desire into a Reality.

In thirty years in the photographic business there have been several revolutionary changes. Doubtless there will be many more. Whatever they may be our Policy shall be to furnish (without following every mere will-o'-the-wisp) the very best of those goods which painstaking testing shall prove to be of benefit to our customers in the Simplification of Photographic Processes and the Advancement of the Art.

C. K. Co., Ltd.



FROM A SEED PLATE NEGATIVE

*Copyright by Knafl & Bro.
Knoxville, Tenn.*



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

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No. 7

THE CLEVELAND NATIONAL CONVENTION

The Cleveland Convention has been written into the history of the National Association as one of the most progressive conventions that has ever been held.

While records for actual attendance were not broken, the dues of approximately 2,500 members, many of whom could not be present, were paid into the treasury, and the exhibits, demonstrations, lectures, entertainment and the enthusiasm shown by those in attendance were all that could be desired.

The entire week was marked by extremely warm weather, for which Cleveland was not especially to blame, the same condition existing all over the country. The convention hall offered ample floor space for all the manufacturers' exhibits, for the meetings and lectures, as well as the picture exhibit, but the space

for demonstrations was rather crowded.

The picture exhibit was judged by Messrs. Croughton, Knaffl and Towles, and was exceptionally good, salon honors being given to the following exhibitors:

H. Lee Bell, Pensacola, Fla.

I. Buxbaum, Brooklyn, N. Y.

Pasquale S. Culotta, Baltimore, Md.

E. E. Doty, Battle Creek, Mich.

Dudley Hoyt, New York City.

F. S. Jacks, Muskegon, Mich.

George J. Kossuth, Wheeling, W. Va.

H. C. Mann, Norfolk, Va.

James W. Porter, Youngstown, Ohio.

Jane Reece, Dayton, Ohio.

C. R. Reeves, Anderson, Ind.

May L. Smith, Binghamton, N. Y.

Strickler Studio, Pittsburgh, Pa.

A. O. Titus, Buffalo, N. Y.

Edward H. Weston, Tropico, Cal.

Aside from the regular picture exhibit there were the National Salon, New England Salon, Middle Atlantic States Salon, ex-Presidents' exhibits, a United States Government exhibit and the manufacturers' exhibits.

The entrance to the Coliseum, which is in the center of the building, led one directly into the Eastman picture exhibit. This exhibit was of exceptional educational value because it contained a number of panels of Artura prints, each of which displayed the work of one man, the prints being made, trimmed and framed by the exhibitor himself. The individuality of the man's work was thus made a distinctive part of each separate panel of pictures and, as was often remarked, it was just like making a visit to a number of the leading photographers' studios.

Besides the individual panels, one end of the Eastman print exhibit was devoted exclusively to the work of Cleveland photographers. There were also several panels of pictures selected from a great number of studios and several panels of enlargements, the work being of exceptional quality.

In another large section was a complete display of Eastman professional apparatus, including the Century Studio Camera line, Graflex Cameras and all the apparatus which goes to make up the modern studio equipment.

In still another section of the hall were the Plate and Film exhibits which were the largest and most pretentious ever shown at a convention. Permanent cabinets containing the most modern lighting equipment were used

for displaying the film and plate negatives, each of which was accompanied by a positive. It was an exhibit of exceptional merit showing the wonderfully uniform quality of Seed Plates and demonstrating the many advantages of Portrait Film for difficult home portraiture and studio work.

Directly opposite the plate and film exhibit was the booth of the Kodak Research Laboratory in charge of Dr. Mees and several scientific workers from Kodak Park. The object of the exhibit was to show the direct relation of the scientific to the practical side of photography. Such matters as color separation, including the uses and advantages of color sensitive plates and color filters, were illustrated and explained in a practical way and all questions of a technical nature were answered and explained in detail. One interesting piece of apparatus displayed was a shutter testing machine invented by one of the Research Laboratory workers and used for the accurate testing of shutter speeds. With this device the opening and closing of a shutter is photographed upon a strip of motion picture film, the exposures ordinarily being made at the rate of one thousand a second, each exposure being $1/30,000$ of a second. If ten images of the shutter opening are recorded on the film during the time the shutter is opening and closing, the shut-



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ter speed is 1/100 of a second. If twenty images are recorded the shutter speed is 1/50 of a second, etc., it being possible to accurately determine the number of exposures per second.

One of the unique features of the convention was the publicity given the slogan: "*Your friends can buy anything you can give them—except your photograph.*" Large framed posters displaying the slogan in the same form as used in the magazine advertisements were displayed on easels in all the leading hotel lobbies, small cards bearing the slogan were hung in each hotel room, cards welcoming the P. A. of A. to Cleveland and displaying the slogan were shown in the windows of the down-town stores, the Cleveland newspapers contained the slogan in a prominent advertising space each day, buttons bearing the slogan were pinned on every photographer attending the convention, the *Saturday Evening Post*, a thousand copies of which were given away at the Eastman Exhibit on Thursday, contained a full page advertisement of the slogan, a banner bearing the slogan was stretched over the entrance to the Statler Hotel, two similar banners were prominently displayed at Cedar Point on the day of the outing and the slogan was set to the tune "When Johnny Comes Marching Home," the sheets of music being distributed

on the train and sung on the trip to Cedar Point.

A handsome show case card with the slogan embossed in gold letters was also presented to each photographer in attendance.

It is quite certain that every photographer who attended the Cleveland convention knows that slogan—almost every one in Cleveland saw and read the slogan and knew there was a convention of photographers in town, and many photographers went home with a better idea of how to give publicity to the slogan in their own town with the idea of creating a desire for photographs and bringing the business to their own particular studios.

The next convention city was not selected, this matter being left to the judgment of the incoming board. The officers elected for 1917 are as follows:

President, Ryland W. Phillips, Philadelphia.

First Vice-President, Charles L. Lewis, Toledo, O.

Second Vice-President, Howard D. Beach, Buffalo, N. Y.

Treasurer, G. L. Hostetler, Des Moines, Ia.

Secretary, John I. Hoffman, Washington, D. C.

An impressive feature of the Cleveland Convention was the simple ceremony carried out by direction of the Association when past Presidents S. L. Stein, Frank W. Medlar, and George M. Edmondson journeyed to the last resting place of J. F. Ryder,



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A TRIBUTE TO MEMORY

first president of the organization, and E. Decker, the ninth president, whose graves lie within a few hundred feet of each other in Cleveland's famous cemetery. There the past presidents placed upon the graves of the distinguished dead, wreaths as tributes to the memory of the men who contributed so much to the welfare of the National Association.

A considerable amount of business was transacted by the Congress, much of which was suggested by the president's speech. The art and business lectures were interesting and instructive and very well attended, and standing room was at a premium

at all of the demonstrations, the one made by Mr. Norton in the park being exceptionally interesting and offering suggestions for similar profitable work in one's own town.

The reception and dances, the evening excursion on the lake and the trip to Cedar Point offered all the diversion necessary to make the week thoroughly enjoyable.

It was a good convention and those who went with the idea of profiting by the educational features received a full measure of good ideas, business and advertising suggestions and the broadening influence of the un-



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selfish fraternal feeling that marked the entire convention.

The retiring officers are to be congratulated upon the good judgment and untiring efforts which made such a successful meeting possible.



A CAMERA OF NEW SIZE—A PICTURE OF NEW PROPORTIONS

The popularity of various view camera sizes has almost invariably been due to their fitness for pictures of different prices. Very little thought has been given their relative proportions because there has not been a noticeable difference. So there has been no opportunity for the photographer to offer, at the same price, a choice of two pictures of practically the same size, as regards area, but of widely differing proportions.

The 8 x 10 size has become most popular because it permits the photographer to ask a fair price for his work. But there are times, many times, when the 8 x 10 proportions are not suitable for the subject that is being photographed. The amount of foreground and sky that detracts from the picture's appearance may be trimmed off and the picture greatly improved, but this reduces it in size and the portion trimmed off is a loss.

Believing a camera of correct

proportions for such subjects would meet with universal approval, a new size has been added to the Eastman View Camera line. This is the 7 x 11 Eastman View No. 2. The picture is one inch narrower than the 8 x 10, and one inch longer, so the area is almost the same. The price of 7 x 11 plates and films is the same as for 8 x 10, and the price of paper and other material is slightly less. But the looks of the picture for all suitable subjects is a wonderful improvement over the 8 x 10 as regards proportions.

In photographing groups the increased length is a decided advantage and in practically all landscape work the 7 x 11 horizontal permits of much more pleasing composition than is possible with the 8 x 10 size.

For many architectural subjects the upright of this size is especially suited, and the same may be said of many landscape subjects, such as trees, waterfalls, mountains, etc.

While we do not predict that the 7 x 11 size will supplant the 8 x 10, we do believe it will become very popular for the reasons already given, and its addition to the commercial man's equipment will be advantageous in many ways and for a great variety of work.

This camera has two distinct features in addition to all the most approved conveniences



FROM AN EASTMAN PORTRAIT FILM NEGATIVE

*By B. V. Mathews
Concord, N. C.*



which have been built into the other sizes of the Eastman View No. 2 cameras. These two features are, an exceptionally wide front board with a sliding movement which permits the centering of the lens on either half of the 7 x 11 plate when two exposures are being made on a plate, and greater swing of the back, which will be found of exceptional advantage in difficult architectural work.

It is not necessary to go further into the details of this line of cameras, for they are already well known. They combine every practical convenience necessary for ease of operation and are constructed of materials which give them strength and stability.

Anticipating that most photographers who purchase this size camera will prefer to use Eastman Portrait Film, an Eastman Portrait Film Holder will be supplied with this camera unless a plate holder is specified.

THE PRICE

F. O. B. Rochester, N. Y.

Eastman View No. 2, 7 x 11, with case and holder	\$35.00
Extra Plate or Film Holders, each	1.25
Extra Lens Boards, each	1.00



*A Majestic Print Dryer
will be an economical addition
to your equipment for
it is a wonderful time saver.*

THE PEOPLE YOU PHOTOGRAPH

In one respect, of course, you should treat all your customers alike, that is, in your business dealings with them. Courtesy, combined with straightforward and honest business methods, should be extended to all.

When it comes to securing pleasing portraits and giving general satisfaction, however, you must study individual sitters; you must suit your methods of working to the particular type with which you have to deal.

When a new sitter enters his studio, the photographer should forget the pose, the lighting and the background which he used for the previous sitter, and should approach his new subject with an open mind.

There is plenty of evidence, in windows and showcases, that some professionals do not do this. The same pose, the same lighting and the same background are used for every type. Occasionally the treatment happens to suit the sitters and the pictures are pleasing, but often it is incongruous and the portraits are entirely without artistic merit.

Here is a type you know very well. She is the wife of a leading local professional man, she is a little reserved in her manner, very particular on points of etiquette, and is apt to wear a more



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severe expression among strangers than among her immediate friends and acquaintances. She is taller than the average woman, somewhat thin, her face has lost much of its plumpness, and, as a consequence, the nose and cheek bones seem unduly large. You can put down her age as about fifty, her hair is just turning grey, but you cannot describe her as an old woman. She is plainly and neatly dressed in a gown of dark material — her social standing, and respect for good form, would prevent her from dressing in anything loud or ultra-fashionable. She is neither faddy nor fussy, she is a good sitter and she appreciates good work. What are you going to do to secure the most pleasing picture?

Whether you succeed in making her forget that she is with a stranger, and in getting her to put on a brighter expression, depends entirely upon your own tact and conversational powers. There is one suggestion, however, which may be made — give her something to do. If you have a recent wedding group, or any other picture with portraits of people she knows in it, hand it to her and she will soon be busy picking out her acquaintances.

It is obvious that you must not attempt a fancy pose — there must be no twisting of the neck to get the head into an unnatural position. Anything stagey will be resented. If you err at all in this

respect, err on the side of dignity and severity.

The safest pose is undoubtedly a three-quarter length in a sitting position. It can always be made dignified, and, where the face is not exactly young and beautiful, the smallness of the head in the picture does not emphasize the features.

The pose of the head must be one that will not exaggerate the prominence of the nose and cheek bones. This is best secured by turning the head away from the camera until the nose projects a little beyond the outline of the cheek. This allows the nose to fill up the hollow in the outline caused by the thinness of the face.

A strong light coming from a high point should be avoided with this sitter. Such a light would catch the prominent features and deepen the shadows below them, thus emphasizing the very points you want to subdue. A full soft light, most of it coming from a source not higher than the level of the sitter's head, will lighten up the sunken parts of the face and reduce the prominence of the nose and cheek bones.

If you use a white background for this picture, you increase your difficulties. The reason is that the white ground makes the outlines of the portrait very pronounced, and, in this case, neither the face nor the figure will stand it. A solid picture,

with a medium background, is much more suitable. It will add to the softness and prevent the figure from having a silhouetted appearance.

Here is another type. She is younger than the last—she may be thirty-five, but her fresh, healthy complexion and her jolly disposition would enable her to pass for twenty-eight. Her figure is plump, in fact she may be called stout, her neck is short, her face is round with the features small in comparison. She is dressed in a white satin evening gown. Her manner is lively, she keeps up a flow of conversation all the time she is in the studio.

You have no difficulty here in making your sitter feel at home—you can give all your attention to posing and lighting.

A head-and-shoulders vignette will avoid the almost impossible task of getting graceful outlines into the full or three-quarter length figure.

You will, however, have to work carefully, even with the head and shoulders. If you try a sitting position, you will notice that the head seems to sink into the body and that the neck looks shorter than ever. Try a standing position, and note the difference. Let your sitter stand in such a way that she rests evenly on both feet. This will prevent crouching and avoid any unevenness in the height of the shoulders.

Now ask her to rest her hands on the back of a chair placed in front of her. The back of the chair should be just high enough to cause the sitter to lean slightly forward when she rests upon her hands. The difference with such a sitter is surprising. The appearance of stoutness is reduced, the neck seems longer and more graceful, and the squat, huddled-up effect is overcome.

Do not forget the height of the camera. You must work with it fairly high, otherwise you will dwarf the head, shorten the nose and altogether spoil the pleasing effect you have secured by the standing position.

A moment's thought will show you that the lighting you used with the first sitter will not give you the most pleasing result with this sitter. Then you had to deal with a thin face, hollow cheeks and prominent features; now the face is fleshy and round and the features are short and blunt. A broad, soft lighting from a low point would reduce what little relief there is in the face and would work against the effect you want to produce.

Cut off nearly all the low side light and let your main light come from a point well above the level of the sitter's head. Do not soften too much with screens—you want "point" and "crispness" to define the shadows below the nose and chin, and to give the



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features all the relief possible. The background, of course, will be the one you generally use for vignettes.

There are so many of these recognized types, both among adults and children, that their further consideration must stand over till another issue.



OUR ILLUSTRATIONS AND HOME POR- TRAITURE

In your town or city nearly every one of any means has a home and nearly every home has an attractive lawn or flower garden which is very comfortable and attractive during the summer months.

They are the out-door living rooms of the family, especially of the children, and are often ideal spots for the making of portraits that are really different.

It is very well to sit in a studio and expect patrons to come to you and to buy backgrounds and arrange vine covered arbors to simulate outdoor effects, but these are merely imitations at best, while the real outdoors offers greater opportunities for portraiture and more real business than can possibly be drawn into the studio.

The photographer is constantly striving for new effects and new lightings and nowhere can

they be found in such profusion as in home portrait work.

Mr. Norton's outdoor demonstration on Portrait Film at the National Convention showed in a very simple way the possibilities of such work, though the average photographer would not care to have an audience of a hundred or more photographers while making his first attempt at home portraiture.

It seems very simple but really good work requires experience, and the portrait photographer is the one who has the necessary equipment and is the best qualified to make a success.

Home portraiture requires portrait lenses and a camera with convenient adjustments if one is to be successful, for there is a wide difference between home portraiture and view work.

The lightings are selected rather than made and the same may be said of composition, except as regards the figures that are a part of the picture, but it is necessary for one to have selective ability to recognize a good lighting effect or see the possibilities for good composition in the ordinary home surroundings.

Successful home portraits are really studied effects, some results being secured with the morning light that would not be possible in the afternoon, so it is often necessary to make more than one trip to a home, unless the conditions have been care-



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*By B. V. Mathews
Concord, N. C.*



fully studied beforehand. But the orders that can be secured from a set of good negatives will almost always warrant spending a little extra time and material in securing satisfactory results.

Our illustrations from the work of Knaffl & Bro. give a very good idea of attractive garden pictures that are more appreciated than pictures produced in the studio because of the additional charm of the surroundings. A woman is proud of her home and equally proud of everything that goes to make the home beautiful, and an attractive garden is not the least of these.

Mr. Knaffl has made a business of making pictures of this sort for years and has found a ready sale for many of them as art studies, but we show them for the suggestions they may offer to the man who would take up outdoor portraiture in addition to his studio work.

The illustrations from the work of Mr. Mathews offer further suggestions for home portraits that may be made in practically any home by any photographer who is proficient in negative making and is willing to make as much of a study of home portraiture as he has made of his studio work.

Mr. Mathews has made a success of home portraiture in North Carolina just as other photographers have made a success of this line of work in different

parts of the country. It appeals to the public, and if your patrons have not demanded such work it is only because they have not seen it. Sooner or later the demand will come and it is far preferable for the photographer to take the initiative and get the credit for being progressive.

Mr. Mathews uses Portrait Film exclusively for negative making, finding its non-halation properties advantageous, not only for difficult exposures made against the light, but, as well, for reproducing the delicate, shimmering lights of white draperies, the brilliancy of which the halation of an ordinary glass plate so often destroys.

And once such a negative is secured, there is no paper that will so faithfully reproduce all its quality as Artura. Our illustrations are from Artura Iris prints which Mr. Mathews finds most satisfactory for the high grade of work his patrons demand.



Artura Iris—the inimitable

Wherever quality is the first consideration, Artura wins, for there is no other paper quite as good.



FROM AN EASTMAN PORTRAIT FILM NEGATIVE

*By B. V. Mathews
Concord N. C.*





AS a little remembrance for the new or old acquaintance of vacation days—your photograph.

Your friends can buy anything you can give them—except your photograph.

Make the appointment to-day

THE PYRO STUDIO

Cut No. 229. Price, 50 cents.

THE ONLY CONDITION

We make but one condition in our offer of cuts for the use of photographers.

It is obvious that two photographers in the same town would not care to use the same cut, and we are therefore obliged to limit this offer to one photographer in a town. It will be a case of first come first

served. The first order from a city will be promptly filled. Succeeding orders (if any) will necessarily be turned down and the remittance, of course, will be returned. It is also obvious that we cannot, on account of the cost of the drawings, furnish any large variety of cuts at the nominal prices quoted, and therefore can offer no substitute cut. Get your order in *first*. C. K. CO., LTD.

BULLETIN: THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY FOR 1916



Pittsburgh, Pa.	. . . . .	September 12, 13, 14
Albany, N. Y.	. . . . .	September 19, 20, 21
Washington, D. C.	. . . . .	September 26, 27, 28
Knoxville, Tenn.	. . . . .	October 3, 4, 5
Atlanta, Ga.	. . . . .	October 10, 11, 12



Of equal importance to you in securing results and to us in manufacturing sensitive material is the certainty of a standard strength and purity of the chemicals used.

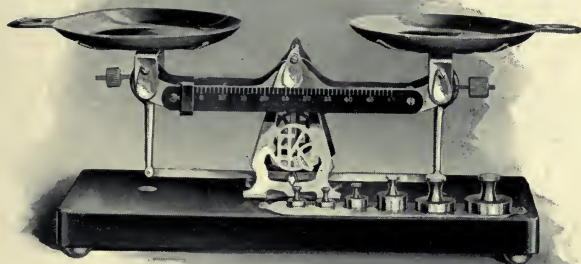
Specify C. K. Co. Tested Chemicals and be certain of your results.



*Look for this seal on the
container.*

Canadian Kodak Co., Limited,
Toronto, Canada.

All Dealers'.



Eastman Scale

An avoirdupois scale that you can be sure is accurate, that has no small weights to lose or misplace and that permits you to secure the correct weight, quickly and conveniently.

The beam with the sliding weight is the feature which simplifies the working of this scale. The large weights are marked in ounces or fractions of ounces and in grains as well. Place the weight which comes nearest to the proper amount in the right hand pan, slide the weight on the beam to the number of grains which will make up the exact amount and place chemicals in left hand pan.

The scale is made of the best material—the beam is black with plain white markings, all other metal parts being nickelled—all bearings are of hardened steel, and the balance adjustment is extremely sensitive.

THE PRICE

Eastman Scale \$4.00

Canadian Kodak Co., Limited,

Toronto, Canada.

All Dealers'.

WANTED

OLD NEGATIVE GLASS

We will purchase Old Negative Glass, $4\frac{3}{4}$ x $6\frac{1}{2}$ and larger standard sizes, providing same is in good condition and packed carefully, in accordance with our instructions.

We will pay all the freight on shipments of 100 lbs. or more, except from localities where the freight rate exceeds \$1.00 per 100 lbs., in which case the shipper will be required to pay the excess.

Prices and further particulars will be furnished on application.

Canadian Kodak Co., Limited,

Toronto, Canada.

Department S.

Eastman Matte- Enamel Bromide

A medium weight stock with smooth, matte surface, tinted a trifle to lend warmth to the highlights and halftones.

M-E yields prints with rich, velvety blacks, which are readily turned into pleasing sepias by simple re-development.

The grain of the surface affords an admirable "tooth" for water color, oil, crayon or pastel work.

Canadian Kodak Co., Limited,

Toronto, Canada.

At your dealers'.

The Kodak Safelight Lamp



A modified form of
the Wratten Safe-
light Lamp.

Price, \$4.00

With one Safelight (5 x 7) of
any series desired.

Made of metal, brown outside, inside
white to intensify the reflection from the
electric bulb in the top.

Dimensions, $8\frac{3}{4}$ inches high, $7\frac{1}{8}$ inches
wide and 6 inches deep. Four feet of cord
furnished with socket, but no bulb.

*A reliable lamp at a price within
the reach of all.*

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Toronto, Canada.

At your dealers'.

Work in Light that's Safe

Such light is afforded by a Kodak
Safelight Lamp in conjunction with

Wratten & Wainwright Safelights

Series 00—A bright yellow, suitable for use
with D. O. P. papers generally.

Series 0—A bright orange, suitable for use
with Bromide Paper and Lantern Slide Plates.

Series 1—An orange color, suitable for ordinary
plates, not color sensitive.

Series 2—For extra rapid orthochromatic
plates and films, which are sensitive to green,
but not red.

PRICE

Any Series—5 x 7 size \$.60

Canadian Kodak Co., Limited,

Toronto, Canada.

All Dealers'.

Waste Not—Want Not

Neglect of time and temperature is probably responsible for more waste in photographic work than all other causes combined, as well as seriously impairing the quality of your pictures.

Be particular on these points and cut down the waste for the general good.

<i>The Eastman Timer</i>	\$2.00
<i>Thermometer Stirring Rod</i> . . . . .	.75
<i>Eastman (Tank) Thermometer</i> . . . . .	.65

Canadian Kodak Co., Limited,

Toronto, Canada

At your dealers'.

LITTLE HELPS TO BETTER PICTURES

Good tools and proper facilities will assist even the inspired craftsman to make better things, and this applies most aptly to photographic work, into which enter so many factors that are really fundamental, though seemingly of no great importance.

These will help you do better work, with greater convenience, during the coming holiday rush:—

Eastman Rotary Print Trimmer .	\$5.00
Eastman Tested Hydrometer . .	1.25
Eastman Etching Knife	1.00
Eastman Mask Charts, 8 x 10, per doz.	.15
Eastman H. R. Print Paddle . .	.40

Order now from your Stock House.

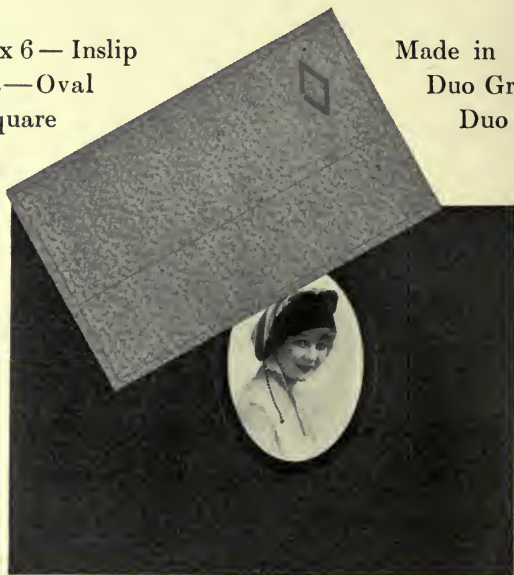
Canadian Kodak Co., Limited,

Toronto, Canada.

THE ELLWOOD

For 4 x 6 — Inslip
Prints—Oval
and Square

Made in
Duo Grey and
Duo Brown



The Ellwood, a folder that is entirely different from what you have been using, a folder you will have to see to appreciate its beauty and quality. This is without doubt the most attractive folder we have put out for your best grade work, and at a staple price. Insert and Cover Designs are entirely new and are brought up in Tint to combine with the rich tone of the stock, which when mounted produces a very harmonious effect. Be sure and see samples. We know the Ellwood style will please you.

Sample of One Size Mailed Free

MANUFACTURED BY

Canadian Card Co., Toronto, Canada.

OUR POLICY

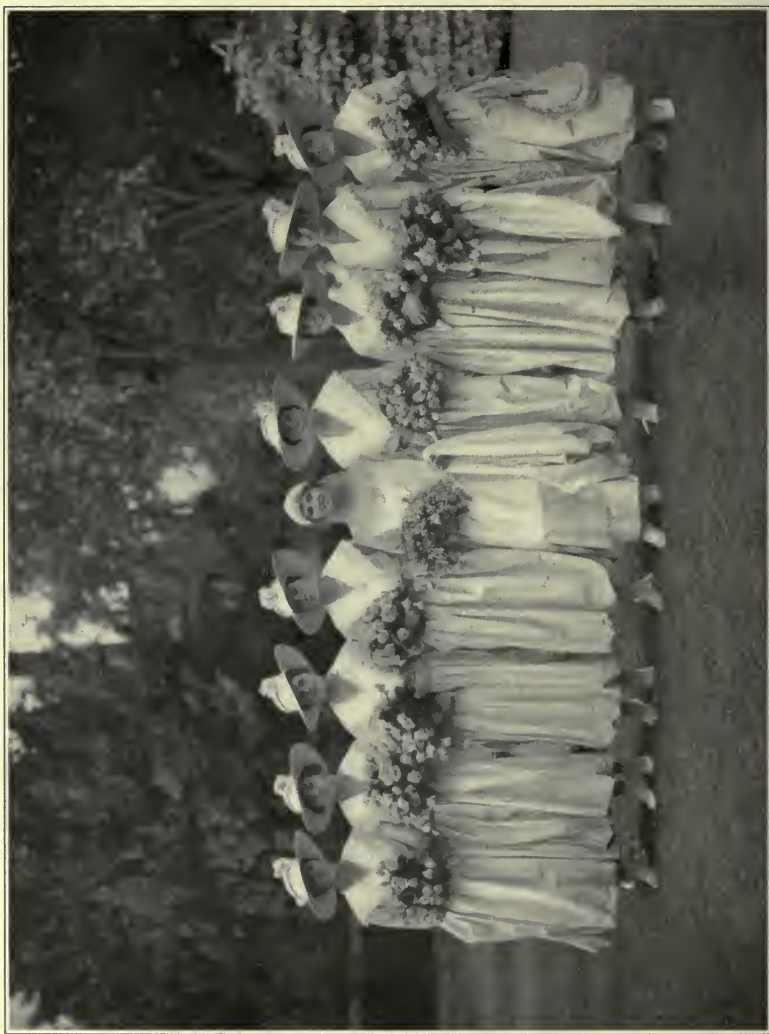
Our business was established on a quality basis. It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

Our theory is that we can best serve ourselves by supplying our customers the best goods. Our acts have made this Theory a Policy, for we have not merely the desire to make the best goods but the means of converting that desire into a Reality.

In thirty years in the photographic business there have been several revolutionary changes. Doubtless there will be many more. Whatever they may be our Policy shall be to furnish (without following every mere will-o'-the-wisp) the very best of those goods which painstaking testing shall prove to be of benefit to our customers in the Simplification of Photographic Processes and the Advancement of the Art.

C. K. Co., LTD.



ARTURA PRINT, FROM EASTMAN PORTRAIT FILM NEGATIVE

By Morrall-Hoole Studio
Rochester, N. Y.



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

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PANCHROMATIC RESULTS

There is no reason for using a panchromatic plate when an orthochromatic will answer the purpose, and on the other hand it is useless to use an orthochromatic plate for a subject that is entirely beyond the range of its capabilities.

Orthochromatic plates will do certain things and do them well. Panchromatic plates will also do certain things and do them well, the difference being that the panchromatic will do everything that the orthochromatic will do and a great deal more.

Because all plates are, to a degree, sensitive to all light, has led some photographers to believe that with an extremely long exposure a fairly satisfactory rendering of red objects can be secured on ordinary orthochromatic plates, but such is not the case. If the subject contains other colors than red it is not

possible to secure even a passable rendering.

The ordinary plate is sensitive to blue, violet and ultra-violet. The orthochromatic plate is sensitive to these same colors, and in a certain degree to green and yellow, while the panchromatic is sensitive to all the colors of the spectrum.

All plates, however, are super-sensitive to blue, violet and ultra-violet, so it is necessary with orthochromatic and panchromatic plates to use a yellow filter which will cut out all the ultra-violet and enough of the blue and violet light to bring these colors into proper relation to the other colors to which these plates are sensitive. These yellow filters could be done away with if plates could be made less sensitive to blues and violets—but this is not possible.

Yellow filters then are used to cut out the surplus of blue light, but they in no way increase the sensitiveness of the plate to other

colors. They make an increase of exposure necessary only because they cut out the greater portion of the light to which the plate is most sensitive.

With the orthochromatic plate this allows bright green, yellow, blue and violet objects to make an impression on the plate more nearly in proportion to the impression they make upon the eye, so a K2 filter and orthochromatic plate can be said to give an approximately correct rendering of these colors.

They are no more sensitive to red, however, than an ordinary plate, so, regardless of the filter used, red objects will photograph as black in an orthochromatic plate. A panchromatic plate *must* be used to secure a truthful rendering of red, orange or any color of which red is a part.

Examples of results secured by using panchromatic plates are usually compared with results secured on ordinary plates, and while the difference does not exaggerate the rendering of red objects it may seem an exaggeration to those who use orthochromatic plates and color filters. For this reason we show two examples of the best results that could be secured on orthochromatic plates with a filter and the results on Wratten Panchromatic Plates with K3 filter.

In the first example (A) the center of the rug is a brilliant red, the design showing in black.

One sees at a glance that the orthochromatic plate does not show any contrast between the red and black, the design being entirely lost. The background of the outer border is buff and this is rendered very well by the orthochromatic plate. With an ordinary plate this would also be dark. The various colored figures in the outer border are also fairly well rendered except the reds.

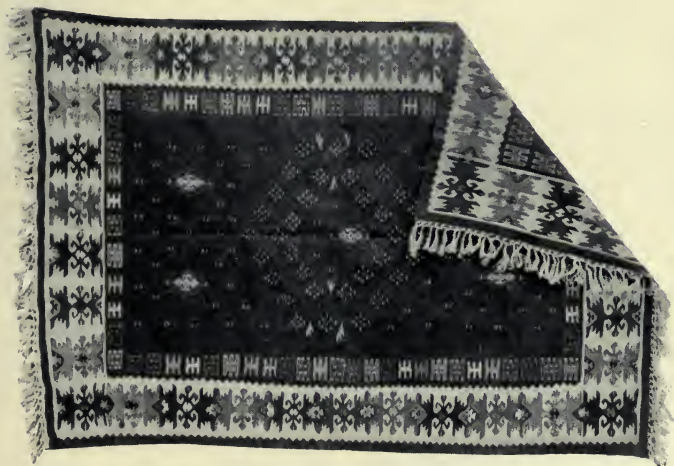
The result could not be called satisfactory, however, as the prints would not give a good idea of the appearance of the rug, and if the prints were to be colored those from the panchromatic negative would be very satisfactory, while those from the orthochromatic negatives would be impossible.

The second example (B) shows a rug with black design on a dull red ground, the smaller figures in lighter colors being outlined with black. The orthochromatic plate picks out the blues, yellows, greens and whites, but the black design, which is of greatest importance, is entirely lost. The panchromatic plate gives a satisfactory rendering, the result being what the eye sees as nearly as can be shown without coloring the print.

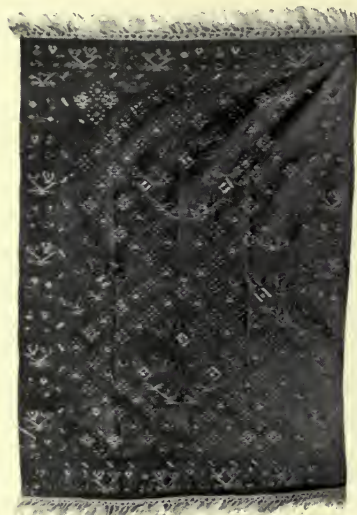
Correct rendering with panchromatic plates requires only the use of the correct yellow filter (K3) which absorbs the surplus of blue light. There are instances, however, where only



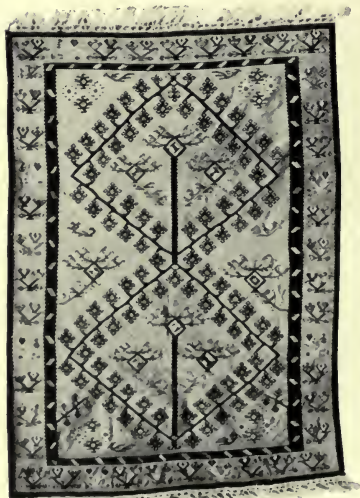
THE SAME RUG
Written Panchromatic, K₃ Filter



(A) PIROT RUG
Orthochromatic Plate, with Filter



(B) Orthochromatic Plate,
with Filter



Wratten Panchromatic, K3 Filter

an incorrect rendering of colored objects will give a satisfactory result in a photograph. For example, a carpet or rug may have a dark green ground with an orange or red figure that is of a tone as dark as the ground, the only contrast being in the colors. A perfectly correct rendering would make both colors appear in the photograph in so nearly the same shade of grey that there would be no contrast.

In such a case one of the colors must be over-corrected or made lighter. A green filter will absorb red, allowing the green to photograph lighter and an orange filter will absorb green, allowing the red to photograph lighter, the nature of the subject determining which of the colors should be made lighter to secure the most satisfactory result, but these results can only be secured on a panchromatic plate.

Within certain limits orthochromatic plates will give excellent results—beyond those limits only panchromatic plates can give satisfactory results.



*You can be sure your
developing light is safe
if you use a*

**Wratten or Kodak
Safelight Lamp**



ARTURA PRINT, FROM EASTMAN PORTRAIT FILM NEGATIVE

*By Morrall-Hoole Studio
Rochester, N. Y.*



OUR ILLUSTRATIONS —PORTRAIT FILM RESULTS

There have been many changes in photography in recent years, one of which has been the gradual breaking down of many studio traditions by the slow but sure development of home portraiture. And this in turn has been due in a great measure to the successful introduction and increasing popularity of Eastman Portrait Film.

A few years ago the photographer almost considered it beneath his dignity to take an outfit to the home of one of his patrons to make a portrait, and made no effort to duplicate the results secured under his skylight. His studio was for that purpose and his patrons must come to him and accept the work made under conditions favorable to him.

The same condition exists today but not to so great an extent. Many photographers welcome the commission that takes them into the home because it offers the opportunity for new effects in unlimited variety, more individuality in each sitter's portraits, and larger orders.

There is an exclusiveness to the home portrait that has a strong appeal, not merely because it is made in the home but because it usually includes enough of the atmosphere and

background of the home to give it individuality.

Home portraiture has also had its influence on the photographer's permanent place of business. There is no reason why a studio should not impress one with the idea of individuality the same as the work it produces, and when the personality of the photographer is reflected in both, the impression created is doubly valuable.

Many new studios are being built and many old ones made over to conform with ideas gained by working in home surroundings. Better taste is being used in plans, decorations and furnishings, the idea being to make the customer for portraits comfortable in mind and body.

The Morrall-Hoole Studio of Rochester, N. Y., is an example of the modern home portrait studio. Many sittings are made in the studio, but the greater portion of the work is home portraiture. The studio is located on the second floor of a new, modern office building at a point where Rochester's best residence street enters the business section.

The interior bears little resemblance to a photographic studio because there is no evidence of a skylight, display cases nor the usual studio office fixtures. The decorations are in soft tones of grey and the few pictures shown on the walls are in carved wood frames, the gold or silver leaf



ARTURA PRINT, FROM EASTMAN PORTRAIT FILM NEGATIVE

*By Morrall-Hoote Studio
Rochester, N. Y.*



finish harmonizing with the tones of the prints. The furnishings are comfortable and in good taste and the dressing and posing rooms are very conveniently arranged.

Sittings are made by the light from two large plate glass windows which afford ample illumination. A light of this nature might be rather difficult for some photographers to handle, but the man who makes a business of home portraiture would not ask for better light conditions.

Messrs. Morrall and Hoole have had a wide experience in home portraiture, having worked in a number of cities while in the employ of the Matzene Studio of Chicago. This led them to believe that the field was broad enough for a permanent business in the average city and their Rochester venture has proved to be a decided success.

Eastman Portrait Film is used exclusively, both for home and studio sittings, because of its convenience and the quality of the film negatives, and Artura because it will most truthfully reproduce this quality in the print.

Some of the most interesting work of this studio is being produced on Eastman Bromide Fabric, the prints being painted in oil by their own artist. These paintings have exceptional merit, are effective and sell very readily.

Mr. Morrall is the business

head of the concern and has exceptional ability as a salesman, while Mr. Hoole is the man behind the camera who is responsible for the results shown in our illustrations. The combination is well balanced and is a very satisfactory one for such a business.



KODELON

A NEW DEVELOPING
AGENT

We hope soon to be able to supply and recommend Kodelon, a developing agent which exhaustive laboratory and practical tests have demonstrated to be a suitable developing agent, in combination with Hydrochinon, for Artura, Azo and other developing-out papers.

Some of those who have tried Kodelon contend that the results are even superior to those secured with the coal tar developers in general use before the chemical shortage. We recommend it with confidence in the results it will produce, and our interests and those of the photographer who uses our products are identical.

Kodelon should be used in accordance with the following formulas, the chemicals being dissolved in the order named. The developers should be used full strength.

Formula for Artura Iris, Azo



ARTURA PRINT, FROM EASTMAN PORTRAIT FILM NEGATIVE

*By Morrall-Hoole Studio
Rochester, N. Y.*



and other papers for professional use:

Water	40 ozs.
Kodolon	10 grains
Hydrochinon	40 grains
C. K. Co. Sulphite of Soda	180 grains
C. K. Co. Carbonate of Soda	180 grains
Saturated Solution Potassium Bromide,	
one drop to each two ounces of	
developer.	

Formula for Velox, Azo, Bromide and other developing papers for amateur finishing and commercial work:

Water	32 ozs.
Kodolon	25 grains
Hydrochinon	90 grains
C. K. Co. Sulphite of Soda	330 grains
C. K. Co. Carbonate of Soda	2 $\frac{1}{4}$ ozs.
Potassium Bromide	4 grains

For a time Kodolon will be supplied in one ounce and one-quarter pound bottles.

THE PRICE

Kodolon, 1 oz. bottle . . .	\$1.00 1.30
Kodolon, $\frac{1}{4}$ lb. bottle . . .	1.75 4.00



SOFT AZO K

In the brief time it has been on the market Azo K has made itself solid with everyone who has tried it. No other paper of similar standard and price has afforded the same desirable quality as K, and we are now enlarging its field of usefulness by putting out Azo K Soft.

The present K will be known as Azo K Hard, for it conforms to the Hard standard, and the same difference in contrast will exist between K Soft and K Hard as now prevails between E Soft and E Hard.

This new grade will be obtainable in single and double weight papers, as well as post cards. Regular Azo prices will apply, and the paper is available at once.

We have been influenced to make this addition by the opinions of scores of consumers who have urged that this new comer will enable them to standardize their less expensive work of general character on K, in its two contrasts.



GETTING COMMERCIAL BUSINESS

We occasionally have requests for cuts suitable for advertising commercial photography, but these requests are usually from photographers who have recently taken up commercial work as a side line.

The percentage of newspaper readers who are prospective customers for commercial work is so very small that the money can be spent to much better advantage in direct advertising.

Many commercial photographers use the post card as a part of their advertising plan, mailing a neat photographic card each month to prospective customers for commercial work.

The card may contain several small pictures each month, as well as the month's calendar, the pictures being varied enough to in-



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Rochester, N. Y.*





ARTURA PRINT, FROM EASTMAN PORTRAIT FILM NEGATIVE

*By Morrall-Hoole Studio
Rochester, N. Y.*



clude all lines of local commercial activity as well as local events of general interest.

A photographic post card used in this way by a photographer has suggested the same plan to a manufacturer who contracted for several thousand cards each month for a year. The attractive thing about such an order is that the negatives can be made in advance for the greater part of the series and the cards printed at the photographer's convenience. Good orders are almost invariably secured for individual prints from the original negatives.

The really keen commercial photographer has a sixth sense that is highly developed. It might be called a sense of suggestion. If the method of manufacturing an article is interesting to him, he suggests that photographs showing the method would also be interesting to others. If he photographs a new modern building, its details suggest individual photographs of lighting fixtures, marble, stone and the tile work, floors and wood work, hardware, metal work, etc. These photographs are readily sold to individual contractors who wish to advertise the fact that they had a part in the building's construction, and such pictures lead to other work until the photographer has established an endless chain of business.

Personal, direct advertising by mail, by solicitation, by news pictures published with due credit, and by good show-case displays, will bring the best results to the commercial photographer.



NO. 3 EASTMAN FOCUSING CAP FOR ENLARGING CAMERAS

This device has proved to be such a convenience for the man who does enlarging that we have made it in a size to fit lens barrels of 3 to $3\frac{7}{8}$ inches diameter, to be known as No. 3. The No. 1 fits lens barrels of $1\frac{1}{2}$ to $2\frac{1}{4}$ inches, and the No. 2, $2\frac{1}{4}$ to 3 inches.

The device is a sliding carrier which attaches to the front of the lens barrel. It contains two openings, one of which is fitted with a light red glass. This permits one to focus directly on the bromide paper or to adjust the paper on the easel without danger of fogging.

To make the exposure, move the carrier to one side and back again to cap the lens. Four rubber tipped adjustable clamps permit the device to be fitted to lens barrels of different sizes within its limits.

THE PRICE

No. 1 Eastman Focusing Cap	\$.75
No. 2 Eastman Focusing Cap	1.00
No. 3 Eastman Focusing Cap	1.50



ARTURA PRINT, FROM EASTMAN PORTRAIT FILM NEGATIVE

*By Morrall-Hoole Studio
Rochester, N. Y.*





ARTURA PRINT, FROM EASTMAN PORTRAIT FILM NEGATIVE

*By Morrall-Hoole Studio
Rochester, N. Y.*



SERVICE AT ITS BEST

Do you ever consider what it would have meant to you had there been no Canadian factory to take care of your requirements the last two years?

You know that Canadian-made Seed Plates have been raised in price by about 14%. Cabinet Royals have been increased about 16%. But do you know that in England, where photo glass is made, plate prices have been advanced more than 45%?

It's true that we are buying old negatives and paying handsomely for them, but the figures we quote, with the further expense of freight and washing plus the inevitable high percentage of loss from breakage, make a cost for clean glass about equal to pre-war figures. Silver went up and up—so did Bromide of Potassium and Gelatine. Labor also is more expensive. New glass from the factory costs now about four times what it did before August, 1914, and the supply is totally inadequate. What do you think of the rise in plate prices?

Take paper—you know there's a kind of shortage, but do you ever figure why our papers are not costing you more than they did? Gelatine and Silver and Potassium Bromide all enter into the production of paper, but in the face of higher figures for these ingredients, paper prices have remained as before the War,

though even the raw stock has been far more expensive and difficult to secure.

A rough but fairly accurate computation is that the photographer uses 75 cents worth of plates to \$2.00 worth of paper, so that from a selfish standpoint it would be a mighty good thing for us, and quite justifiable on the ground of cost, to raise the price of paper. You know we haven't.

Take chemicals—up till a year ago we were supplying Elon at \$13.00 per pound. As soon as our stock gave out, prices shot up to the sky. We could have withheld several hundred pounds and coined money by doling it out at fancy figures—up to \$50.00 per pound. We didn't do this either.

And the quality of the goods—plates were never better—papers have been good enough to enable most photographers to sell more of their work at better prices than ever before. Here and there a batch of paper has gone out in which trouble has developed, but that trouble could not have been foreseen in the circumstances.

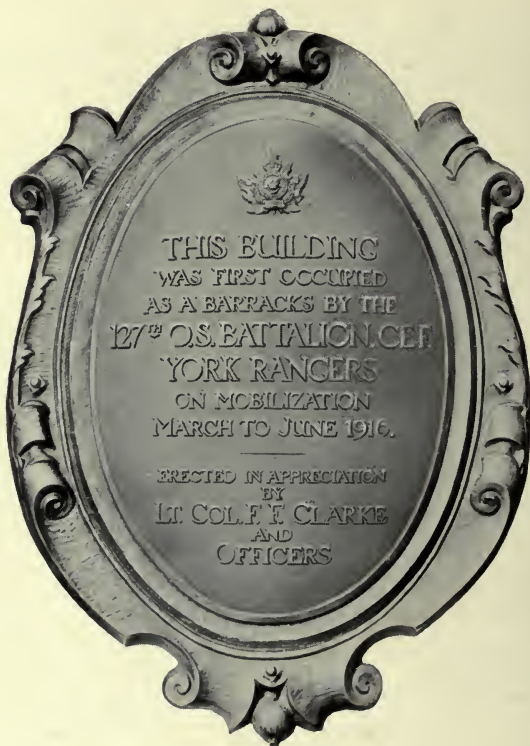
What's the reason? The simplest answer is in two words—Kodak Service. We put the matter to you as thinking men, and we are sure that the general conclusion will be that it pays to patronize home industries, who render you service at its best.



ARTURA PRINT, FROM EASTMAN PORTRAIT FILM NEGATIVE

*By Morrall-Hoole Studio
Rochester, N. Y.*





AT KODAK HEIGHTS

For a graceful appreciation of services rendered one would have to go far afield to find anything to surpass the tangible form in which the Officers of the 127th Battalion, C. E. F., are expressing their gratitude for the accommodation we gave them and their men at our new plant last Spring.

Above is a picture of the tablet the Colonel and his Officers have placed on the unit they occupied. The size is about 24 x 33 inches, of solid bronze with design and lettering in relief. We appreciate this token of their appreciation, for we have nothing but pleasant recollections of their stay and were mighty well pleased to serve them as we did.



ARTURA PRINT, FROM EASTMAN PORTRAIT FILM NEGATIVE

*By Morrall-Hoole Studio
Rochester, N. Y.*





IF you can't get back to the old home as frequently or as regularly as you'd like, a new photograph will come nearest to taking your place — will bring cheer to home-keeping hearts.

Make the appointment to-day

THE PYRO STUDIO

Cut No. 230. Price, 50 cents.

THE ONLY CONDITION

We make but one condition in our offer of cuts for the use of photographers.

It is obvious that two photographers in the same town would not care to use the same cut, and we are therefore obliged to limit this offer to one photographer in a town. It will be a case of first come first

served. The first order from a city will be promptly filled. Succeeding orders (if any) will necessarily be turned down and the remittance, of course, will be returned. It is also obvious that we cannot, on account of the cost of the drawings, furnish any large variety of cuts at the nominal prices quoted, and therefore can offer no substitute cut. Get your order in *first*. C. K. CO., Ltd.

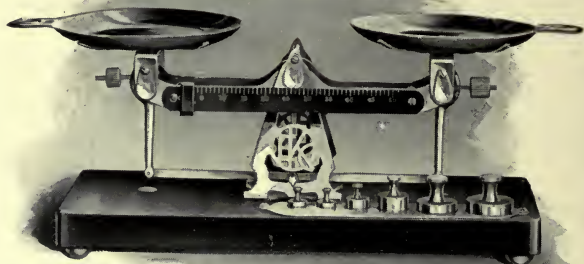
BULLETIN: THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY FOR 1916



Atlanta, Ga.	October 10, 11, 12
Memphis, Tenn.	October 17, 18, 19
Louisville, Ky.	October 24, 25, 26
Des Moines, Iowa	Oct. 31, Nov. 1, 2
Grand Rapids, Mich.	November 7, 8, 9
Cleveland, Ohio	November 14, 15, 16

VACATION





Eastman Scale

An avoirdupois scale that you can be sure is accurate, that has no small weights to lose or misplace and that permits you to secure the correct weight, quickly and conveniently.

The beam with the sliding weight is the feature which simplifies the working of this scale. The large weights are marked in ounces or fractions of ounces and in grains as well. Place the weight which comes nearest to the proper amount in the right hand pan, slide the weight on the beam to the number of grains which will make up the exact amount and place chemicals in left hand pan.

The scale is made of the best material—the beam is black with plain white markings, all other metal parts being nickelled—all bearings are of hardened steel, and the balance adjustment is extremely sensitive.

THE PRICE

Eastman Scale \$4.00

Canadian Kodak Co., Limited,
Toronto, Canada.

All Dealers'.

Uncertainty has no place in the compounding of photographic formulae—results depend upon the positive action of the chemicals used.

Specify C. K. Co. Tested Chemicals and be sure of your results.



*This seal on the container guarantees
the quality of its contents.*

Canadian Kodak Co., Limited,
Toronto, Canada.

All Dealers'.

WANTED

OLD NEGATIVE GLASS

We will purchase Old Negative Glass, $4\frac{3}{4}$ x $6\frac{1}{2}$ and larger standard sizes, providing same is in good condition and packed carefully, in accordance with our instructions.

We will pay all the freight on shipments of 100 lbs. or more, except from localities where the freight rate exceeds \$1.00 per 100 lbs., in which case the shipper will be required to pay the excess.

Prices and further particulars will be furnished on application.

Canadian Kodak Co., Limited,

Toronto, Canada.

Department S.

LITTLE HELPS TO BETTER PICTURES

Good tools and proper facilities will assist even the inspired craftsman to make better things, and this applies most aptly to photographic work, into which enter so many factors that are really fundamental, though seemingly of no great importance.

These will help you do better work, with greater convenience, during the coming holiday rush:—

Eastman Rotary Print Trimmer .	\$5.00
Eastman Tested Hydrometer . .	1.25
Eastman Etching Knife	1.00
Eastman H. R. Print Paddle . .	.40
Eastman Mask Charts, 8 x 10, per doz.	.15

Order now from your Stock House.

Canadian Kodak Co., Limited,
Toronto, Canada.

The Kodak Safelight Lamp



A modified form of
the Wratten Safe-
light Lamp.

Price, \$4.00

With one Safelight (5 x 7) of
any series desired.

Made of metal, brown outside, inside
white to intensify the reflection from the
electric bulb in the top.

Dimensions, $8\frac{3}{4}$ inches high, $7\frac{1}{8}$ inches
wide and 6 inches deep. Four feet of cord
furnished with socket, but no bulb.

*A reliable lamp at a price within
the reach of all.*

Canadian Kodak Co., Limited,
Toronto, Canada.

At your dealers'.

Work in Light that's Safe

Such light is afforded by a Kodak
Safelight Lamp in conjunction with

Wratten & Wainwright Safelights

Series 00—A bright yellow, suitable for use
with D. O. P. papers generally.

Series 0—A bright orange, suitable for use
with Bromide Paper and Lantern Slide Plates.

Series 1—An orange color, suitable for ordinary plates, not color sensitive.

Series 2—For extra rapid orthochromatic plates and films, which are sensitive to green, but not red.

PRICE

Any Series—5 x 7 size \$.60

Canadian Kodak Co., Limited,
Toronto, Canada.

All Dealers'.

Waste Not—Want Not

Neglect of time and temperature is probably responsible for more waste in photographic work than all other causes combined, as well as seriously impairing the quality of your pictures.

Be particular on these points and cut down the waste for the general good.

The Eastman Timer \$2.00

Thermometer Stirring Rod75

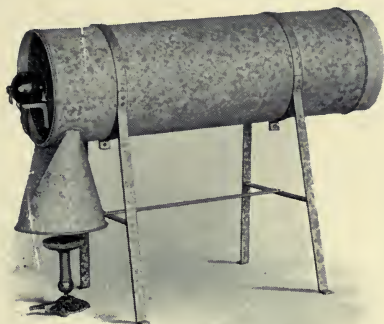
Eastman (Tank) Thermometer65

Canadian Kodak Co., Limited,

Toronto, Canada

At your dealers'.

Your Majestic Print Dryer



Improved Majestic Print Dryer No. 1

Will lighten the trying burden of the Christmas rush, by enabling you to get your work out on time and save the precious hours you used to waste in explaining the delay to impatient customers.

Prints for delivery, unmounted, loose mounted or in folders are properly shaped and bone dry in from 15 to 20 minutes.

The No. 1 Dryer has an 11-inch drying roll wound on a metal core inside of which fits a 7-inch roll. The large roll is for large and the small roll for small prints. The capacity of the two rolls is about 200 average size prints.

The No. 5 Dryer has five rolls, one 11-inch roll in the center and four 6-inch rolls around this. Its capacity is about 600 average size prints.

The No. 1 will dry from 1,600 to 4,000 prints—the No. 5 from 3,000 to 12,000 prints in a day, depending upon the use of extra rolls and the ability to keep them filled.

THE PRICE

Improved Majestic Print Dryer No. 1, complete with prying rolls, electric motor, fan, gas heater and stand	\$30.00
Improved Majestic Print Dryer No. 5, complete as above	60.00
Extra Drying Rolls, 11-inch, complete	3.00
“ “ “ 7-inch, “	2.50
“ “ “ 6-inch, “	2.25
Extra Muslin-Faced Blotter, for 11 or 7-inch rolls	2.20
“ “ “ “ “ 6-inch rolls	1.60

CANADIAN KODAK CO., LIMITED,

All Dealers'.

TORONTO, CANADA.

STYLE ILIAD

A "Corner Holder" Style for Sheet Portraits

Sizes—4 x 6, 5 x 8 and 6 x 10.

Colors—Grey, Buff and Brown.



See this attractive new style before placing your order for your best grade Xmas work. It is an entirely new design for your sheet prints and does not give them that rather crowded appearance of the ordinary "Corner Holder" design where the corners are flush with edges of cover. *The Iliad* has a delicately duo-tinted border which blends harmoniously with tone of print, giving a larger and newer look to sheet portraits. The cover is etched finished with neat two-toned Roman Gold and Color design on upper left hand corner, with a delicate line running all round each flap. Don't fail to see samples when travelling salesman calls, or send three two-cent stamps and we will mail you sample.

MANUFACTURED BY

Canadian Card Co., Toronto, Canada.

OUR POLICY

Our business was established on a quality basis. It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

Our theory is that we can best serve ourselves by supplying our customers the best goods. Our acts have made this Theory a Policy, for we have not merely the desire to make the best goods but the means of converting that desire into a Reality.

In thirty years in the photographic business there have been several revolutionary changes. Doubtless there will be many more. Whatever they may be our Policy shall be to furnish (without following every mere will-o'-the-wisp) the very best of those goods which painstaking testing shall prove to be of benefit to our customers in the Simplification of Photographic Processes and the Advancement of the Art.

C. K. Co., LTD.



FROM AN ARTURA IRIS PRINT

By J. E. Abbe
Lynchburg, Va.



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

ESTABLISHED 1901

ESTABLISHED 1906

VOL. 8

NOVEMBER 1916

No. 9

THE BIG GUNS AGAIN

Bang! Bang! Bang!

The big guns of our advertising have opened fire and are paving the way for your advertising at short range.

They are scattering your slogan along the whole front of the army of Christmas shoppers and the fire is going to be an effective one. The big guns have the range and are far-reaching, but we are too far back of the firing line to do the close work. You must climb out of your trenches and do the close fighting in your local papers.

Our big guns are the National magazines, and through them almost every family in the entire country will be reminded, most of them several times over, that "*Christmas, 1916—Your friends can buy anything you can give them—except your photograph.*"

This slogan has now become so familiar to the general public that its value to you is greater

than at any time since it first appeared in the big magazines. As a slogan that will fulfill its purpose by selling photographs, it is more than ever coming into its own.

Thousands of readers have analyzed it and then said to themselves, "That's a fact—I'll remember to have photographs made when I have occasion to make gifts to my friends"—and the occasion is now at hand.

These same readers will again be thoroughly sloganized long before Christmas, but they should not be left floundering about with indecision as to where they can have photographs made.

This slogan in your local paper will attract their attention quicker than anything else, if the form used in the magazines is duplicated in the ad. which bears the name and address of your studio.

Big advertisers and advertising magazines have recognized the force of this copy and have commented upon its boldness—the

way it attracts attention, even when displayed in a small space with the same proportion of white space to type matter.

This is a most important point in using this copy (See page 7). It catches the eye because the white space isolates it. Crowd it in with other reading matter and it will be as hard to find as the proverbial needle in the haystack.

Don't get the idea that this slogan is old and that you should discard it for this reason, or that its value to you is nil because someone else has used it. The older and more familiar it becomes the better it is, the stronger its punch, the quicker it hits the mark and the more lasting is its impression.

Hundreds of photographers have already adopted it as a permanent slogan and have had good results from its use in almost every imaginable form of advertising, but this in no way prevents you from using it as well—in fact, it is more reason you should.

This is the real gift season. Gifts are made at all times of the year, but the cream of the gift season is from now until Easter.

The successful photographer who always has a good holiday business advertises to keep it and make it a bit better each year.

The most important preparation you can make this year is

your advertising to get new business. You must prepare to take care of the business after you get it, but, first of all, you must get it. And as every merchant in your town is going to advertise extensively for the same dollars you are after, you can't sit idle and expect a big share of business to come your way.

You have a distinct advantage over all your competitors in other lines of business because our magazine advertising is not creating a desire for some particular article which we manufacture, but it *is* creating a desire for photographs, which you or some other photographer can make.

The desire for photographs is made exceptionally strong because of the personal element that enters into the making of such a gift. The only thing personal about the ordinary gift is the card of greeting that accompanies it—its value can be reckoned in dollars and cents.

"Your friends can buy anything you can give them—except your photograph" is a truth that is sinking deeper into the mind of the public with every repetition—and your competitors are advertising to sell everything imaginable—*except photographs*.

It's a strong competition, but you have the advantage, so make this slogan yours and use it.

The copy shown on page 7 will occupy a full page in *Good Housekeeping*, *Harper's*, *Century* and



FROM AN ARTURA IRIS PRINT

*By J. E. Abbe
Lynchburg, Va.*



Scribner's, and approximately a quarter page in the *American*, *Independent*, and *Vogue*. These will be December magazines but they appear early in November. There will also be a full page in November *Outlook*, almost a page in November *Life*, and approximately quarter pages in early December numbers of *Collier's* and the *Saturday Evening Post*, giving a total circulation of fully four and a quarter million copies.

With your advertising to start and finish the campaign, photographs for "Christmas 1916" will be far ahead of any other gift commodity in the minds of those who read—and that includes the greater proportion of those who buy.



GOOD PROFITS IN OIL COLORED PRINTS

Eastman Bromide Fabric is now being used in a number of lines of photographic work and new uses are continually being found for it. It is an excellent quality of fabric coated with a Bromide emulsion and is being produced with exceptional uniformity.

Probably the greatest use for Bromide Fabric in portraiture is for producing oil painting effects and for this work it is superior to any photographic paper.

In selecting a medium for photographs to be colored with oils, a fabric surface is most desirable because it gives a realistic effect,

and a better price may be asked for the finished work because it shows that it is genuine.

It is not difficult to give a Bromide Fabric print the appearance of an oil painting. It requires no knowledge of drawing because the print is only tinted. You can do such tinting yourself, with a little practice, or some one of your employees can soon acquire the knack of handling the colors and produce good results.

Good taste in selecting colors, care, and a little time for practice are the essentials. Sepia prints are best for the purpose, and these are secured on Bromide Fabric by redevelopment. The hypo-alum tone is too cold.

Any good grade of artists' oil colors in tubes will answer, the following colors being necessary: Rose Madder, Crimson Lake, Carmine, Chrome Yellow, Vandyke Brown, Prussian Blue, Cinabar Green and White, also Megilp for sizing. A few small camel's hair brushes, a one-inch bristle brush, absorbent cotton, turpentine and a bottle of Nepera Waxing Solution complete the outfit.

With a tuft of cotton, go over the print with the Megilp, and after about fifteen minutes rub off and allow to dry for half an hour. This sizes the print and prepares it for the coloring. The idea is to apply "opaque" colors so thinly they are transparent.

Christmas, 1916.

Your friends can buy
anything you can give
them—
except your photograph.

There's a photographer in your town.

Eastman Kodak Company, Rochester, N. Y.

Put a small daub of each of the colors to be used on a piece of glass. Apply this paint, undiluted, to the print with a tuft of cotton after same has been rubbed on a piece of white paper until color shows an even blend of weak tint. When sufficient color has been applied to any one part of print, go over with a clean tuft of cotton to blend the colors. For small surfaces apply color with a small brush and blend.

For flesh tones, apply Rose Madder, then yellow—for lips, nostrils and deep flesh shadows, Carmine. The colors should be thin and transparent for draperies, hair and the light parts of background. After one has become proficient in tinting, the opaque colors may be used to advantage in backgrounds and accessories, though care must be used not to destroy effects of light and shade nor to give too much prominence to objects of minor importance by using colors that are too bright.

Oil paintings are not made with margins, but if there is any occasion to color a print with margins, the margin may be cleaned with a tuft of cotton which has been wound round a tooth pick, dipped in turpentine, squeezed dry and wound with another covering of dry cotton. This will erase the color better than the wet cotton, as the fumes of turpentine will remove the color without spreading it.

Transparent coloring will dry quickly, but if solid colors are applied over parts of the print it should be allowed to dry thoroughly. When dry, apply the Nepera Waxing Solution as you would apply varnish, using the bristle brush for this purpose. The wax will add brilliancy to the colors.

To obtain different tints from the colors mentioned above, mix as follows:

- For brown, mix red and black.
- For purple, mix white, blue and red.
- For pink, mix white and carmine.
- For dark green, mix light green and black.
- For pea green, mix white and green.
- For brilliant green, mix white and emerald green.
- For orange, mix red and yellow.
- For pearl gray, mix white, blue and black.
- For cream, mix white, yellow and red.
- For olive, mix red, blue and black.
- For buff, mix yellow and a little red.

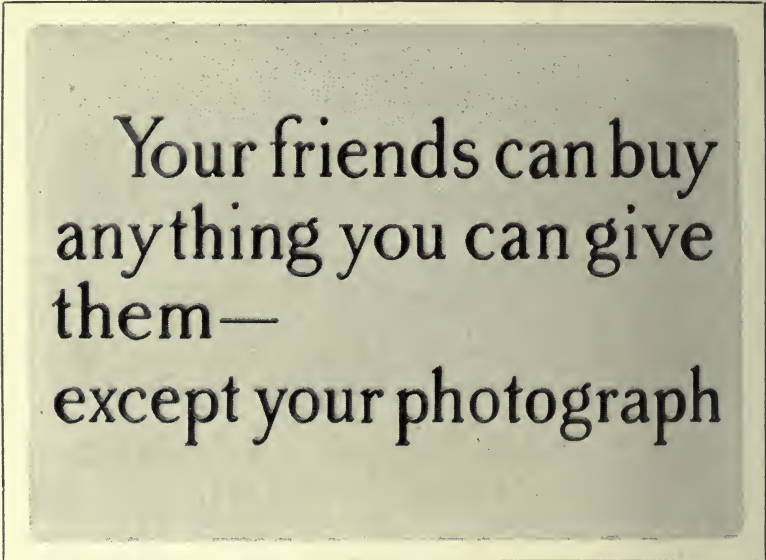
The finished print looks best framed without a margin in a dull gold frame. Several good examples of such work properly framed and displayed will make sales if the work is priced high enough to make it fairly exclusive without being beyond the reach of those who wish a portrait somewhat out of the ordinary. If the work is priced too low it not only becomes common but sufficient time can not be given to produce the best results.



FROM AN ARTURA IRIS PRINT

By J. E. Abbe
Lynchburg, Va.





Your friends can buy
anything you can give
them—
except your photograph

Display Card in Gold Relief Letters

**THIS DISPLAY-CASE
CARD BY MAIL ON
REQUEST**

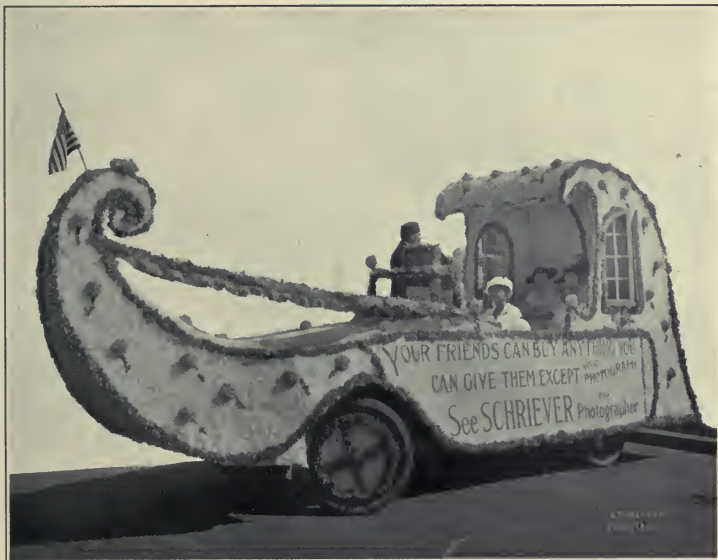
The illustration above is a reproduction of the handsome display-case card which was given to photographers at the Eastman display during the Cleveland National Convention. The illustration, however, fails to give an adequate idea of the attractiveness of the original.

The card has been used in the display cases of some of the best photographers in the country, having been framed by many of them and given a permanent place

of honor in the center of their displays.

The card is $10\frac{1}{2} \times 14\frac{1}{2}$ inches, of heavy weight stock with dull cream enameled surface and gold edges. The letters are gold in strong relief, not being a part of the card itself but embossed separately and attached to the card by a special process used only in manufacturing display cards of the highest quality.

This card is worthy of a place in your display-case and will connect your studio directly with our advertising in the December magazines, making a combination that is sure to bring you additional business.



Mr. J. B. Schriever's Prize Float

As the great majority of photographers of the country could not attend the Cleveland Convention we are going to mail one of these slogan cards to every photographer who is sufficiently interested in the advantages of this advertising to ask for it.

There will be no charge whatever—we want you to have this card and to use it where it will do the most good, will attract the most attention, and bring you the most business.

The card comes to your studio, post paid, on request.



J. B. SCHRIEVER WINS FIRST PRIZE

In the big street pageant of Scranton's golden jubilee the first prize in the advertising division was awarded to J. B. Schriever.

His car was changed into a white gondola with trimmings of purple fringe and chrysanthemums. In the car was a complete photographic outfit and Mr. Schriever was engaged in photographing two young ladies under the hooded rear of the boat. His daughter, Miss Irene, drove the car.

In each side panel of the float was the popular slogan which

Mr. Schriever has used to good advantage. We congratulate him for winning the first prize cup, but he is also to be congratulated for the clever advertising idea.

The thousands of people along the line of that parade, as well as those who read accounts of it in the paper, can not help knowing that J. B. Schriever is one of the live photographers in their town.



OUR ILLUSTRATIONS

Getting college business is just as different from getting ordinary business as golf is different from base ball. In base ball you sit in the grandstand or bleachers and root for your team, but in golf you have to follow the players, close up, from "tee" to "green" over the entire course.

If you have been successful in getting college business you know that you have to follow college activities closely. And you also know that the business is worth while.

There are no set rules to follow, but there are general rules that will apply in most cases. You must take sufficient interest in college affairs to know what is going on and you must become acquainted with the class leaders and leaders in college athletics, dramatic and literary activities.

Once you know these young men or women, as the case may

be, you must show genuine interest in their work and play, otherwise you won't find an opportunity to make pictures that are of sufficient interest to sell.

A few good pictures will give you an opening wedge for more business and in a short time every student in college will be watching your display case for pictures of events that are dear to the heart of every student. If you are continually on the job, follow up every prospect and make good pictures, full of real human interest, you will find that they have a ready sale.

Once you become a sort of official or press photographer there will be little question as to who will do the studio work for the majority of the students.

Mr. J. E. Abbe is an example of the man who has made good in college work, but unlike most photographers he had photography thrust upon him. He had no intention of becoming a photographer until he saw the need for it in his work, and once in it, photography soon crowded his other work out.

Mr. Abbe is associated with a firm of printers and engravers who handle a number of college publications, and finding it difficult to obtain pictures for illustration that to his way of thinking were of sufficient interest—that gave the necessary "pep" and color to college news, he decided to use a Graflex camera



EASTMAN PORTRAIT FILM NEGATIVE, ARTURA PRINT

*By J. E. Abbe
Lynchburg, Va.*





FROM AN ARTURA IRIS PRINT

*By J. E. Abbe
Lynchburg, Va.*



and make some of the pictures himself.

The plan worked fine. He knew the students and knew what they wanted, and the more pictures he made, the more opportunities he found for making pictures, not only for publication but for sale as well.

The Graflex helped him, but he soon found that a studio was almost a necessity. A studio was built and equipped with modern apparatus and its capacity is almost inadequate to take care of the work that has developed from an experiment.

Mr. Abbe is also a home portrait enthusiast and devotes a good portion of the summer months to making portraits of children, using a Home Portrait Graflex for this work.

Seed Plates are used in the Abbe studio and Portrait Film for most of the outdoor work, and as Lynchburg boasts of the sixth largest women's college in the country, and outdoor dramatics and athletics are very popular among the students, the opportunity for pictures is great.

Practically all of the work of the Abbe studio is made on Artura which has found favor with the student body. And quality will always be found one of the essentials in this line of work.



Tozol—the complete developer.

A PROPORTIONAL REDUCER

Most photographers are aware that the various reducers used for lessening the density of negatives differ in the effects they produce. Some of them attack the shadows of the negatives, cutting into the shadow detail; others attack the highlights chiefly, scarcely affecting the shadows at all; while yet others are intermediate in action between these two extremes.

The typical reducer which attacks the shadows most is that named after Mr. Howard Farmer, which consists of a solution of hypo to which has been added enough ferricyanide of potash to make it yellow. If the effect of this reducer is measured, it is found to be similar to that shown

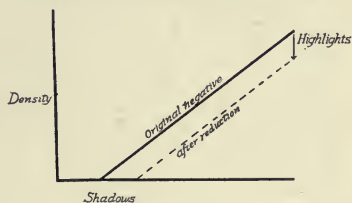


Fig. 1—Farmer's Reducer

in Figure 1, that is, it subtracts an equal amount of density from every part of the negative. Since this removes the same amount of density from the highlights as from the shadows, the proportional effect upon the shadows is naturally much greater than upon the highlights.



FROM AN ARTURA IRIS PRINT

*By J. E. Abbe
Lynchburg, Va.*





FROM AN ARTURA IRIS PRINT

*By J. E. Abbe
Lynchburg, Va.*



The effect of increasing the exposure in making a negative is to add density to all parts of the negative to almost the same extent, so that a reducer which removes density to the same extent from all parts, as does this ferricyanide reducer, may be said to undo exposure, and it is a valuable reducer for negatives which have been over-exposed.

Figure 2 shows the action of the persulphate reducer. Persul-



Fig. 2—Persulphate Reducer

phate attacks the highlights far more than any other part of the image so that if a negative is too contrasty the highlights can be lessened by persulphate without affecting the shadows. The persulphate reducer, however, will not correct an over-developed negative. What is required in an over-developed negative is that each point of the gradation should be reduced proportionally just as the over-development has increased it proportionally and the result would be that of correct development. This effect is shown in Figure 3, where it is seen that the same proportion of each density is removed by the reducer.

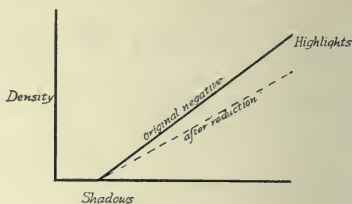


Fig. 3—Proportional Reducer

If a negative could be said to have a density of 100 in the highlights and a density of 4 in the shadows, a proportional reduction of 25% would remove 25 parts of silver from the highlights to 1 part from the shadows.

It has often been stated that proportional reduction is obtained by means of permanganate, but experiment shows that all reducers heretofore used, except persulphate, behave like ferricyanide; that is to say, they reduce the shadows proportionally more than any other part of the negative and they therefore will not correct over-development as a proportional reducer should do.

Far away in the Solomon Islands, Mr. Norman Deck found a short time ago that the use of a combination of permanganate and persulphate would give a proportional reducer, and he published an article in the *Australasian Photo Review* on the subject. Not having facilities for making accurate tests and measurements he suggested that the subject should be investigated further. The Kodak Research Laboratory



FROM AN ARTURA IRIS PRINT

*By J. E. Abbe
Lynchburg, Va.*



has taken up the work and has found that by a slight modification of the formula a truly proportional reducer can be obtained.

In the experimental work, which has been done with great care, it was found that different plates behave rather differently and that if slow, fine grained plates were used there was a tendency towards loss of shadow detail with a reducer properly balanced for use with high speed plates. But, fortunately, the differences between plates generally used by photographers were found to be of no practical importance in this respect, and with the formula here given all plates and film in ordinary use will show proportional reduction, so that the formula can be safely employed to correct negatives which have been over-developed. While temperature will affect the rate of reduction, the proportional nature is not changed.

The formula is as follows:

Solution A—

Potassium Permanganate of Potash 4 grains
10% Sulphuric Acid . . . ½ ounce
Water 32 ounces

Solution B—

Persulphate of Ammonia 2 ounces
Water 64 ounces

For use, take one part of A to three parts of B for three minutes reduction. For six minutes reduction dilute above with an equal volume of water. Following reduction it is advisable

to immerse the negative for five minutes in a 1% solution of metabisulphite of potash or bisulphite of soda, then wash for a few minutes.



TOZOL

FOR THE PROFESSIONAL PHOTOGRAPHER

Tozol is a simplified developing agent with convenient and economical features, as well as vigorous action as a reducer of silver salts. A stock solution of the developer is made by simply adding the sodas, bromide and alcohol to an ounce of Tozol, and this stock solution may in turn be readily varied to suit the various brands of Artura and other developing papers.

Prints developed with Tozol developer have strength and brilliancy with richness and depth of tone. It is specially suited to the various grades of Artura and Azo, but may readily be adapted to Velox and Bromide papers. The following formulae are very simple to compound:

Stock Solution

Dissolve in 30 ounces of hot water in the order named:

1 oz. Tozol.
3 ozs. C. K. Sulphite of Soda.
2½ ozs. C. K. Carbonate of Soda.
45 grs. Potassium Bromide.
4½ ozs. Wood Alcohol.

Developer for Artura Iris and Azo

Stock Solution . . . 2 ozs.
Water 14 ozs.
Sat. Solution Potassium Bromide 4 drops.



FROM AN ARTURA IRIS PRINT

*By J. E. Abbe
Lynchburg, Va.*



*Developer for Artura Chloride
or Non-Curling*

Stock Solution . . . 4 ozs.
Water 12 ozs.

Developer for Artura Carbon Black

Stock Solution . . . 4 ozs.
Water 12 ozs.

Carbonate of Soda Sol.
40 hydrometer test . 1 oz.

Sat. Solution of Potas-
sium Bromide . . . 4 drops.

Dissolve $1\frac{1}{2}$ ounces Carbonate of Soda (Des.) in 16 ounces of water to make a solution 40 degrees hydrometer test.

For Velox, Eastman Bromide and Hard and Hard X Azo, when used for amateur negatives, add two ounces of Carbonate of Soda to the Stock Solution, and for use, take an ounce of Stock Solution to two ounces of water for Velox, Hard or Hard X Azo, or one ounce of Stock Solution to six ounces of water for Bromide.

The Price of Tozol

1 ounce bottle	\$ 1.50
$\frac{1}{4}$ pound bottle	5.80
$\frac{1}{2}$ pound bottle	11.50
1 pound bottle	22.50



NEW MOUNTS

The attention of our readers is invited to the supplementary catalogue recently issued by the Canadian Card Company, in which are listed quite a range of new and up-to-the-minute designs in photographic mountings.

The supplement mentioned also contains certain revisions of their large Spring catalogue, in the way of lines discontinued and prices advanced, on account of

the persistent rise in the cost of raw materials.



TO MAKE A GOOD VARNISH

The way to make a good varnish is to clean some old film negatives, cut them up into small pieces and put them into a bottle containing amyl acetate. They will dissolve quickly, and enough should be put in to make a thick syrup. This syrup will form the base of many useful varnishes and it improves with keeping.

To make a dead-black varnish, take a little of the syrup and dilute it with acetone until it is of a proper consistency to put on with a camel-hair brush. Then add lamp-black until the mixture gives a perfect black when applied with a brush to a piece of smooth wood or metal. It must, of course, be stirred well to produce a perfect mixture. The varnish should be applied with a soft brush, and it is generally best to give a second coat after the first one is dry.

The best lamp-black should be used—not the kind sold at the paint shop, but the better quality sold as artists' material. It is very cheap, and a quarter of a pound will last for several years.



*Watch the work of the man
who uses ARTURA.*



FROM AN ARTURA IRIS PRINT

*By J. E. Abbe
Lynchburg, Va.*



A Gift Suggestion

Portraits
of the
Children
for

Christmas, 1916



*Your friends can buy anything you can give
them — except your photograph*

THE PYRO STUDIO

Cut No. 231. Price, 50 cents.

THE ONLY CONDITION
We make but one condition
in our offer of cuts for the use of
photographers.

It is obvious that two photographers in the same town would not care to use the same cut, and we are therefore obliged to limit this offer to one photographer in a town. It will be a case of first come first

served. The first order from a city will be promptly filled. Succeeding orders (if any) will necessarily be turned down and the remittance, of course, will be returned. It is also obvious that we cannot, on account of the cost of the drawings, furnish any large variety of cuts at the nominal prices quoted, and therefore can offer no substitute cut. Get your order in *first*. C. K. CO., Ltd.

TOZOL

The Complete Developer

Requires the addition of no developing agent. It's right just as it is, and is prepared exactly as it was before the war.

The correct developer for Artura, Azo and Velox.

The Price

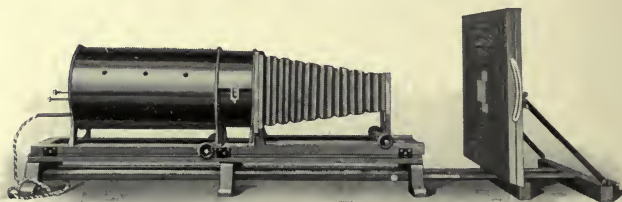
1 oz. bottle	\$ 1.50
¼ lb. bottle	5.80
½ lb. bottle	11.50
1 lb. bottle	22.50

Canadian Kodak Co., Limited,

Toronto, Canada.

At your dealer's.

Don't overlook the big profits of the enlarging business.



We have increased the efficiency of the

EASTMAN ENLARGING OUTFIT

by equipping it with a lamp giving double the volume of light of that formerly used.

Mazda Nitrogen Lamp. 500 Watt—lamp and reflector adjusting screws outside of lamp-house—camera and lamp-house on roller bearings and fitted with quick acting lock nuts—10-inch condensers affording perfect illumination of 5 x 7 negatives—revolving adjustable negative carrier—drop front and hinged back easel and full set of kits to 20 inches—these are a few of the features of the Eastman Enlarging Outfit.

THE PRICE

Eastman Enlarging Outfit, complete with lamp,
but without lens \$100.00

Planatograph Symmetrical Lens, 8-inch focus, 12.00

F. O. B. Rochester, N. Y.

EASTMAN KODAK COMPANY,

All Dealers'.

ROCHESTER, N. Y.

The New Developer:

KODELON

(Paramidophenol-Hydrochloride)

An economical and highly successful developing agent, used in connection with Hydrochinon, for all developing-out papers.

It bears the Kodak Tested Chemical Seal.

THE PRICE

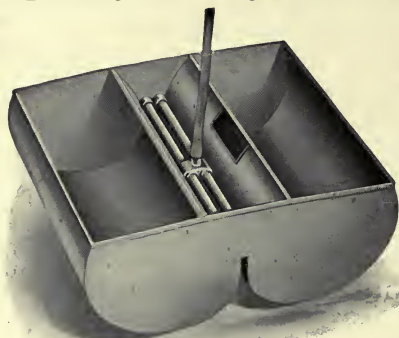
1 oz. bottle	. . . . .	\$ 1.10
$\frac{1}{4}$ lb. “	. . . . .	4.00
$\frac{1}{2}$ lb. “	. . . . .	7.75
1 lb. “	. . . . .	15.00

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers’.

A reputation for promptness is a big asset, especially in a busy season—save time by using a



Rounds Print Washer

at the same time making certain your prints have been properly washed. Twenty minutes in a Rounds Washer is sufficient time to eliminate all hypo and insure thorough washing.

ROUNDS WASHER—MADE IN TWO SIZES

Capacity of 100 Cabinets or 4 x 6 prints,	\$12.00
Capacity of 200 Cabinets or 4 x 6 prints,	\$3.00

Out of the wash water—into the rolls of the

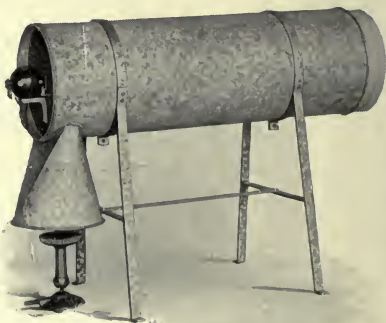
Improved Majestic Print Dryer No. 1

and your prints are properly shaped, bone dry and ready for mounting in from twenty to thirty minutes. The two rolls will dry from 1600 to 4000 prints in a day.

No. 1

MAJESTIC PRINT DRYER

Complete with two drying rolls, electric motor, fan, gas heater and stand, \$50.00
 Extra Drying Rolls complete, 11-inch, . . . 3.00
 Do., 7-inch, 2.50
 Extra muslin faced blotters for 11-inch or 7-inch, 2.20



CANADIAN KODAK CO., LIMITED,

All Dealers'.

TORONTO, CANADA.

SOFT AZO K

In the brief time it has been on the market, Azo K has made itself solid with everyone who has tried it. No other paper of similar standard and price has afforded the same desirable qualities as K, and we have enlarged its field of usefulness by putting out Azo K Soft.

K Soft will conform to the same standard of contrast as do the other Soft Azos, and the same difference will prevail between K Soft and K Hard as between the other Soft and Hard Azos.

Available in Single and Double Weight papers, as well as post cards. Regular Azo prices apply.

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

WANTED

OLD NEGATIVE GLASS

We will purchase Old Negative Glass, $4\frac{3}{4}$ x $6\frac{1}{2}$ and larger standard sizes, providing same is in good condition and packed carefully, in accordance with our instructions.

We will pay all the freight on shipments of 100 lbs. or more, except from localities where the freight rate exceeds \$1.00 per 100 lbs., in which case the shipper will be required to pay the excess.

Prices and further particulars will be furnished on application.

Canadian Kodak Co., Limited,

Toronto, Canada.

Department S.

THE luxuriously appointed studio employs Century Apparatus. Its rich finish and dignified efficiency harmonize perfectly with the most refined surroundings.

THE less pretentious studio *needs* Century equipment to dispel any feeling of uncertainty on the part of its patrons. In no other business is the buyer brought into contact with the mechanism for turning out the finished product.

WITH Century Apparatus your customers see that you have the best.

CENTURY CAMERA DIVISION

EASTMAN KODAK CO.

ROCHESTER, N. Y.

THE GIFT CALENDAR

A PRACTICAL BUSINESS BRINGER

In Olive and Swiss, Sepia and Brown Marble Combinations, for all Tones.
For 4 x 6 Square Prints—7 $\frac{3}{4}$ x 13 Outside Size.



The Gift Calendar, designed for the professional, is characterized by unusual color combinations of stocks—corner holders for the print—silk ring and ribbon and a specially designed pad—different than Calendars of previous years.

The Calendar is made with marble stock for the base, which is finished with a tinted border. The middle insert is of fabric finished deckled edge rag stock; the top insert of extra weight stock with etched edges and embossed raised corners, into which prints are inserted—all in splendid harmony. As all of the print shows, a larger effect than the usual 4 x 6 is produced.

The rich looking silk ring and ribbon is an ornament and a hanger combined. The pad is a specially designed cape style opening from center and is artistically printed in suitable colors. The monthly leaves can be torn off without destroying the beauty of the calendar. It will appeal to you and your customers as an unusually handsome, rich looking calendar.

Sample on receipt of eight 2c. stamps.

MANUFACTURED BY

Canadian Card Co., Toronto, Canada.

OUR POLICY

Our business was established on a quality basis. It has grown because we act on the belief that we can maintain our position in the trade just so long as we make better goods than our competitors—and no longer.

Our customers receive the benefit of the most advanced photographic thought of Europe and America. Kodak factories in Europe and America are in constant touch with each other. Each has the benefit of the work and the discoveries of the other. The very breadth of our business enables us to give to each department absolutely the best that the world affords in technical skill and in producing facilities.

Our theory is that we can best serve ourselves by supplying our customers the best goods. Our acts have made this Theory a Policy, for we have not merely the desire to make the best goods but the means of converting that desire into a Reality.

In thirty years in the photographic business there have been several revolutionary changes. Doubtless there will be many more. Whatever they may be our Policy shall be to furnish (without following every mere will-o'-the-wisp) the very best of those goods which painstaking testing shall prove to be of benefit to our customers in the Simplification of Photographic Processes and the Advancement of the Art.

C. K. Co., Ltd.



"SHORE DUTIES"

FROM AN ARTURA IRIS PRINT

By G. E. Tingley
Mystic, Conn.



STUDIO LIGHT

— INCORPORATING —

THE ARISTO EAGLE .. THE ARTURA BULLETIN

ESTABLISHED 1901

ESTABLISHED 1906

VOL. 8

DECEMBER 1916

No. 10

Christmas is but a few weeks away and everyone will soon be rushed with business.

Don't get too busy to change that display of pictures in your display case. Change it several times between now and Christmas.

—

The Christmas shopper looks over the window displays, including yours, every few days. Give him something new to look at or he will pass photographs by without a second thought.

—

The live merchant is careful to have a new display as often as possible. The shopper who found nothing in a window to interest him yesterday may find a gift suggestion to-day or tomorrow.

—

The shopper who looks at *your* display case to-day and thinks photographs, should be induced

to look at your display a number of times between now and Christmas—but it will take a new display to attract his attention. Get him into the habit of looking for new displays in your case and make it your business to see that he finds them.

—

Don't forget that there is a New Year's and Easter business as well as Christmas business. And that the gift of a photograph at Christmas time should suggest the return of the compliment later on.

—

Change your display before Christmas and again before New Year's and several times before Easter which, while earlier than last year, does not come until April 8th.

Keep your display case working for you *all* the time—you can't advertise too much.



Your Friends Can Buy
Anything You Can Give Them
Except . . .

YOUR PHOTOGRAPH

PHOTOGRAPHS

Made during this month---
OCTOBER---will avoid the
irregular and congested conditions
later, particularly for overseas mails

One-half page ad. from *The Daily Province*, Vancouver, B. C.

ADVERTISING—AND LOTS OF IT

Advertising the fact that you make photographs doesn't make people want photographs. You might just as well be making mouse traps so far as interest in your occupation is concerned.

A man is interested in *himself* and his own affairs, and until you can first convince him that *he wants* photographs you can't interest him in your studio, your ability as a photographer or your excellent service.

Advertising in which you tell of the pleasure a photograph will give to your friends and relatives—in which you tactfully appeal to sentiment and suggest a photograph as a gift that carries with

it the personal thought of the giver—such advertising creates business, because it makes the public want what you have to sell.

Advertising of this nature has been growing until we are no longer surprised to see an entire newspaper page devoted to one such advertisement.

It isn't necessary, however, for one man to use full pages. His business wouldn't warrant it. But there are plenty of photographers who use good space continually and profitably.

The big space is taken up by co-operative advertising—team work. Where business is fairly well divided among the studios of a town, the cost of this advertising per studio is less and its



"WINTER"
FROM AN ARTURA IRIS PRINT

By G. E. Tingley
Mystic, Conn.

effect is greater because it must be of a nature to create new business rather than to split up the business that already exists.

We reproduce a good example of this kind of advertising that does not bear the name of any photographer. It occupied a half page in *The Daily Province* of Vancouver, B. C., October 6th, and, as will be seen, was intended to suggest that photographs be sent to the Canadian boys, "somewhere in France," for Christmas, and that sittings be made in October to insure delivery. It's fine.

Similar advertisements are being used with the names of the photographers sharing the expense placed in a row at the bottom so that one name does not have more prominence than another.

A different plan has been used by Seattle photographers. An entire page spread is made up of individual advertisements with a general heading, "Give Pictures for Christmas This Year." This is followed by a very good argument for photographs as Christmas gifts.

The page also contains a single column reader on the excellence of the photographic work produced by the Seattle studios. This is all good advertising, but probably not so effective as the one of the Vancouver photographers.

A dozen small ads scatter at-

tention while one large one centers it. There is also a tendency in the small individual advertisement to draw attention to the merits of one man's work as against that of another.

The better idea, we think, is to use the entire force of the argument to create a desire for photographs—to make the reader feel that a portrait is the most suitable gift—the one that will be most appreciated.

Once the reader decides to have a portrait made, the object of co-operative advertising has been accomplished. Some photographer is going to get the money that might have been spent for some other luxury. The various display cases or other means of attracting attention to the work of individual photographers will determine *where* the business goes, once it has been created.

Individual advertising should be along the same lines—a good argument for having portraits made and a photographer to make them. But never a knock at another photographer unless you want to send business his way.

Long before Christmas, four and a quarter million magazines, all containing that best argument: "*Christmas, 1916. Your friends can buy anything you can give them—except your photograph*" will have been read by approximately twelve million people and most all of them will



"TRANQUILITY"
FROM AN ARTURA IRIS PRINT

By G. E. Tingley
Mystic, Conn.



have a Christmas shopping list on their minds.

It's worth while to connect up with this advertising in *your* town.



SPEEDING UP YOUR PRODUCTION

You have last year's experience to profit by in handling this year's rush business, but there are things last year's rush business may not have taught you.

You may have handled last year's business very well—as efficiently as your equipment would permit, but you might have methods and equipment that would permit of even greater efficiency. Such a gain should enable you to handle more business with the same amount of effort as last year, but at a less expense per sitting.

You expect more business this year than last—you can influence some people to make early appointments by making this a strong point in your advertising, and still you will have the usual ninth hour rush.

If your studio equipment does not include a Sliding Ground Glass Carriage for Double Plate Holders you can begin your efficiency campaign right here. This attachment for the Century Studio Camera permits you to use reg-

ular view plate holders, twelve holders permitting you to make 24 exposures the full size of the plate or 48 exposures half plate size.

Here is a saving of time in loading and changing plates that is really worth while and will enable you to work faster at your camera.

There are several ways to speed up developing, all, of course, including some form of tank development. If you use the Eastman Plate Tank, two tanks are better than one, while if open tanks are used, there is no more efficient way of handling plates than with Core Developing Racks. The number of plates that can be handled at one time depends upon the size of the tanks and the number of racks used. The plates need not be touched from the time they go in the developer until they are dry, so the danger of scratches and finger marks is eliminated and spotting of negatives reduced to a minimum.

Attention should be given to quick proofing so that proofs may always be delivered promptly. This will surely be the means of securing better orders.

Retouching can hardly be speeded up unless you can teach your retouchers to use less lead and make every stroke of the pencil count. Too many negatives are over-retouched—too many good likenesses destroyed,



"STUDY OF SHEEP"
FROM AN ARTURA IRIS PRINT

By G. E. Tingley
Mystic, Conn.



all of which is a loss of time and possibly a loss of business.

If you haven't a modern printing machine, get one at once by all means—the Eastman or the Crown or the F. & S. Professional.

And once your prints are made a Rounds Print Washer and Majestic Print Dryer will turn them out ready for mounting in an hour at most. You may say, "Why spend money for such apparatus when prints will wash well enough if stirred up occasionally and will readily dry over night?" But why not gain time, please customers and make room for other work by making prints in the morning and delivering them the same day?

The saving of a little time here or there does not seem much of itself, perhaps, but a saving of time on every operation at a busy time may double your producing capacity.

Also, there is the saving of night work, which, though willingly done, makes every one of your employees less fit for their next day's work.

Profit by last year's experience, buy the equipment that will increase the efficiency of each department, advertise to get more business and gain a reputation for prompt deliveries, and you will see a gain both in business and profits.



AN APPEAL TO SENTIMENT

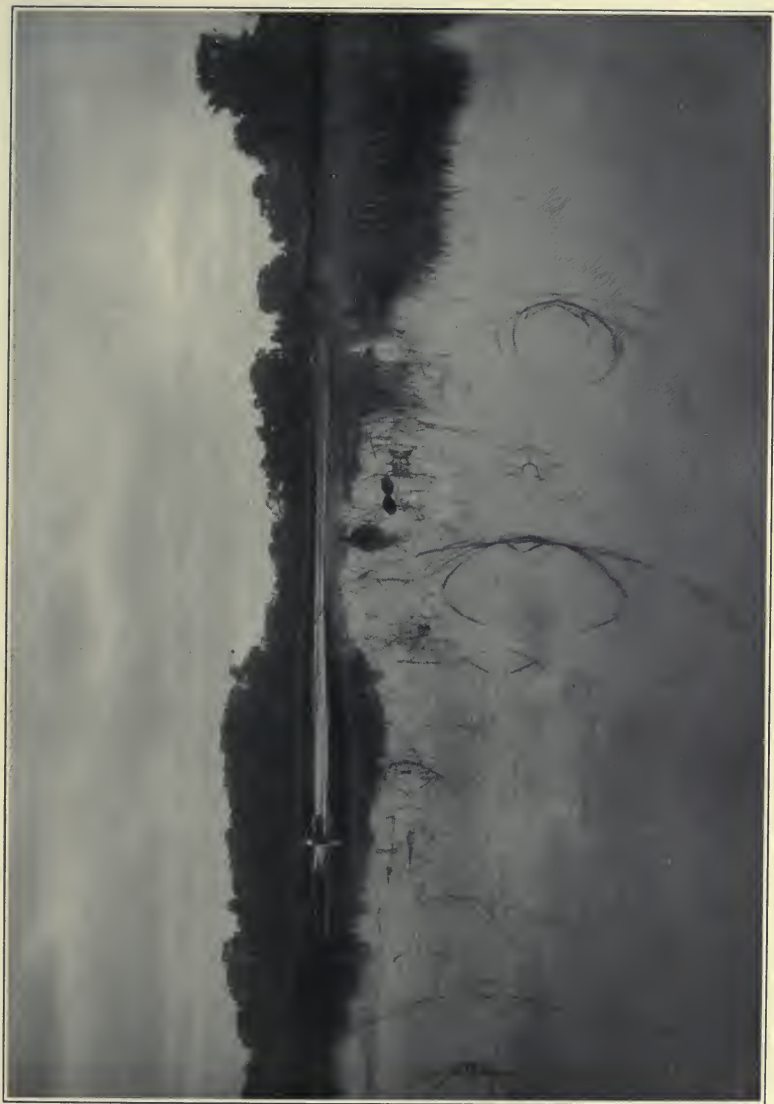
Extracts from the address of Mr. Tim Thrift, at the Cleveland Convention of the Photographers Association of America.

"You will recall that my questionnaire brought out the fact that the most effective appeal a photographer could make was a sentimental appeal.

"A number of the replies mentioned specifically the advertising of the Eastman Kodak Company as illustrative of what they meant by sentiment. This advertiser has done, and is doing, wonderfully effective work for you nationally. What you need to do is to cash in on that work to a greater extent locally by utilizing the same motif—applying it to the individual instead of the public. * * *

"Basically, all successful advertising is successful because it appeals to the emotions. The strength of this appeal varies according to the product advertised. You are indeed fortunate that you have a product which is adapted to the highest form of emotional advertising, the appeal to the sacred sentiments of love—love of children, home, parents, sex.

"But while in this appeal to the sentiments lies your opportunity, in it also lies disaster. To write an appeal to the sentiments, without slopping over, is



"SUMMER EVENING"
FROM AN ARTURA IRIS PRINT

*By G. E. Tingley
Mystic, Conn.*



not an easy task. It is not a matter of fancy, flowery language either, but rather a simple, unaffected naturalness that strikes a responsive chord."



MILWAUKEE, 1917

After carefully considering the five (5) cities and towns from which we received invitations, the official Board of the P. A. of A. for 1917 has decided that Milwaukee is the logical location for the next National Convention.

We, therefore, announce that the next Board meeting will be held in that city in January and if all the necessary requirements for housing the Convention are met in the same hearty spirit displayed in this city's proposals to us, we will hold the next annual Convention in Milwaukee.

The dates will not be decided upon until the Board Meeting.

EXECUTIVE BOARD OF THE
P. A. of A.

By JNO. I. HOFFMAN,
Secretary.



*Make better enlargements
and more of them on*

**ARTURA
CARBON BLACK**

OUR ILLUSTRATIONS

There are many kinds of success, all of which are more or less gratifying, depending upon the desires and inclinations of the man who succeeds and the methods of winning.

A big photographic success in a large city means a continuous struggle. There must be a steady flow of business, for there is a steady flow of expense, and the fight to keep the one fairly in excess of the other often assumes the proportions of a fair sized battle.

Some men enjoy this kind of excitement and are happiest when they are in the thick of the fight, while others do not.

Mr. Geo. E. Tingley of Mystic, Conn., is one of the latter. Although often advised to go to the city, where he might place his talents within the reach of a greater number of people, he has seen fit to enjoy his success in his own way. And who of the city can say he is not wise?

Mr. Tingley has an ideal New England country home, such as would cost the city dweller a fortune were it within the reach of his business. His time is his own to choose between business and pleasure, and he takes exceptional pleasure in his business.

He can make sittings by appointment, work among his flowers when he likes, and choose his time for making those



"TOIL"
FROM AN ARTURA IRIS PRINT

By G. E. Tingley
Mystic, Conn.





"DECLINE OF A PERFECT DAY IN JANUARY"

FROM AN ARTURA IRIS PRINT

By G. E. Tingley
Mystic, Conn.



delightful landscape studies for which he is famous over all of New England.

So there is really much in the life of the successful small town photographer to compensate for the loss of so-called city advantages. His bank balance at the end of the year is often as large as that of the city man, he has lived as well or better and under more healthful conditions, and he can always go to the city when he likes.

While Mr. Tingley makes exceptionally fine portraits, he is best known to the profession by his landscapes, which are not only artistic but thoroughly typical of the New England country.

At first it was a mere hobby—the love of the outdoors, the ability to see a picture and the desire to take it. In a short time there were sufficient negatives and a great enough demand for prints to turn the hobby into a very profitable business.

Mr. Tingley has never given up portraiture, however, and probably never will, for like his home and his flowers, it too is part of his pleasure.

It is our privilege to reproduce a number of these landscapes for our December illustrations. The half-tone engravings are good, but they give only a fair idea of the quality of the prints from which they are made. Mr. Tingley uses Artura exclusively for all of his high grade work.

COPYING PRINTS WITH COLOR AND CONTRAST

Prints having great contrast, that is, very bright highlights and very dark shadows, are difficult to copy successfully, particularly if the shadows are of a non-actinic color such as olive or brown. The copies usually lack detail in the shadows, which reproduce as a black mass. Even if such a prolonged exposure is given that the detail in the highlights is sacrificed it does not seem to help matters but serves only to show the grain of the paper.

When the contrast is merely due to the non-actinic color of the print, there being plenty of detail in the shadows, it is easy to copy by the use of a color sensitive plate with an appropriate filter, for example, a Wratten Panchromatic plate and a red filter in the case of brown or reddish prints, or a green filter in the case of olive or greenish prints.

But sometimes even this expedient fails when the detail in the shadows seems to be beneath the surface.

If it is an unmounted print, a good result may be secured by making the copy partially by transmitted light and partly by reflected light.

The print is placed between two sheets of clean glass and placed in such a position that



"LIGHT BEYOND"
FROM AN ARTURA IRIS PRINT

By G. E. Tingley
Mystic, Conn.





"FEBRUARY"

FROM AN ARTURA IRIS PRINT

By G. E. Tingley
Mystic, Conn.





Copy made by reflected light

Copy made by transmitted and reflected light

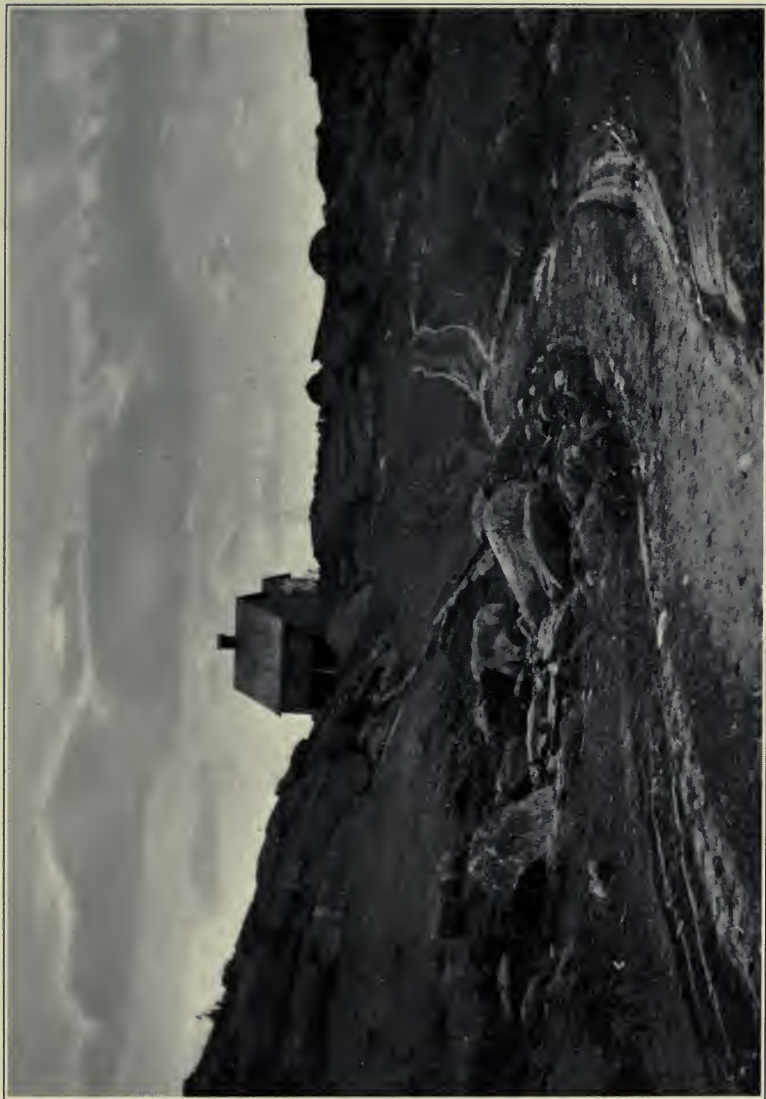
the light will fall on its surface as well as on a white reflector placed behind it.

If one exposure is made, the highlights will very likely be over-exposed and the grain of the paper will show in the lighter portions where the transmitted light is not necessary. If it is not possible to arrange the reflector so that light will be reflected only through the shadows where additional detail is desired, it will be found better to make one exposure with the light on the surface of the print and an additional exposure by transmitted light, moving a vignetting

card about over the highlights while the shadows are receiving the additional exposure by the transmitted light.

The proportion of light coming through the print to that on its surface must be such that the detail required is just sufficiently brought out, otherwise the resulting negative will be too flat and the texture of the paper is apt to show badly.

To shorten the transmitted light exposure, the paper can be rendered translucent with castor oil, but it is not always permissible to do this, and good results can be obtained even with prints



"A DISCOURAGING FARM"
FROM AN ARTURA IRIS PRINT

By G. E. Tingley
Mystic, Conn.



made on heavy weight paper if both exposures are correctly made.

No exact rule as to the proportionate amount of each exposure can be given as this will depend upon the nature of the lighting and the character of the original print.

Such extraordinary means to secure a good copy of a difficult subject may not appeal to the average worker, especially if making copies is not to his lik-

ing, but it is just such stunts—by using such painstaking care to secure a result that will please a particular customer, that many photographers have made a reputation and success and established a foundation of good will which is invaluable to them.



ADDITIONAL CUT SERVICE

For several years we have been supplying the photographer with line cuts for newspaper advertising, as this is the only form of illustration that can satisfactorily be used on the coarse grade of newspaper stock.

We believe, however, that there is a very considerable amount of advertising used by the photographer in which illustrations of higher grade can be used to good advantage.

Booklets, folders, announcements and similar



Half-tone Cut No. 232. Price, 60 cents.

forms of advertising, which are mailed direct, are never used in a large quantity, so that the use of coated paper does not materially increase the cost. And it is an economy to use the best of paper for any such advertising.

The line cuts which we offer for newspaper advertising are reproduced from bold pen and ink sketches. The artist first submits to us his original pencil sketch which is so delicate that it can only be reproduced by the half-tone process. If satisfactory, the sketch is redrawn in ink for line reproduction.

We are having half-tone engravings made from some of these original pencil sketches and will as a trial supply electrotypes of these half-tones each month, as shown above, at cost.

We will also continue to supply the line cuts for newspaper work, as the half-tones will not reproduce properly on newspaper stock, but we would advise the use of the more delicate half-tone cuts for carefully printed advertising on good paper.

Orders for these cuts will be subject to the same conditions that apply to line cuts. Instructions for ordering will be found on page 22.



THE EASTMAN STUDIO SCALE banishes forever the bother of grain weights. There is no more guess work when you use it. It is so convenient that you just get in the habit of being accurate.

SERVICE

Service to-day has a new meaning—so new that you will not find it in the dictionary.

Yet it is very important that every owner of a business should know what service means because very few businesses can thrive without giving it.

The business man who lays himself out to give real service studies his customers' interests as carefully as a good host studies his guests' comfort.

A photographer received an urgent order to supply some framed enlargements for an exhibitor who had found, just before the exhibition opened, that he had some blank space on the wall of his stand. The enlargements were finished on time. More than that—the man who delivered them at the exhibition took a hammer with him and enough picture-wire and nails to hang the enlargements. The exhibitor was even more pleased with the thoughtfulness this showed than he was with the very quick time in which the enlargements had been made.

Service will not make up for bad photography. Good photography, however, is found so frequently nowadays that the man who gives good service as well is far more likely to succeed than the man who relies only on his work.



Christmas
1916

Your friends can buy
anything you can
give them — except
your photograph.

Make the appointment to-day

THE PYRO STUDIO

Cut No. 232. Price, 50 cents.

THE ONLY CONDITION

We make but one condition in our offer of cuts for the use of photographers.

It is obvious that two photographers in the same town would not care to use the same cut, and we are therefore obliged to limit this offer to one photographer in a town. It will be a case of first come first

served. The first order from a city will be promptly filled. Succeeding orders (if any) will necessarily be turned down and the remittance, of course, will be returned. It is also obvious that we cannot, on account of the cost of the drawings, furnish any large variety of cuts at the nominal prices quoted, and therefore can offer no substitute cut. Get your order in *first*. C. K. CO., LTD.

BULLETIN: THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY FOR 1917



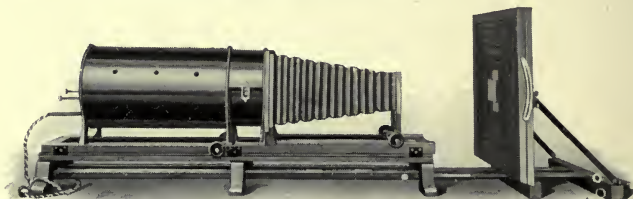
Pittsburg, Pa.	January 16, 17, 18
Philadelphia, Pa.	January 23, 24, 25
New York City	January 30, 31, February 1
Boston, Mass.	February 6, 7, 8

Look for the local announcement of the new school program. There will be many new features—new demonstrations, lectures and practical work that will be interesting and instructive.

The 1917 Eastman School will be worth your while, especially if you will take advantage of the entire three days instructions. Bring your employees with you.



Don't overlook the big profits of the enlarging business.



We have increased the efficiency of the

EASTMAN ENLARGING OUTFIT

by equipping it with a lamp giving double the volume of light of that formerly used.

Mazda Nitrogen Lamp, 500 Watt—lamp and reflector adjusting screws outside of lamp-house—camera and lamp-house on roller bearings and fitted with quick acting lock nuts—10-inch condensers affording perfect illumination of 5 x 7 negatives—revolving adjustable negative carrier—drop front and hinged back easel and full set of kits to 20 inches—these are a few of the features of the Eastman Enlarging Outfit.

THE PRICE

Eastman Enlarging Outfit, complete with lamp,	
but without lens	\$100.00
Planatograph Symmetrical Lens, 8-inch focus,	12.00
<i>F. O. B. Rochester, N. Y.</i>	

EASTMAN KODAK COMPANY,

All Dealers'.

ROCHESTER, N. Y.

The New Developer:

KODELON

(Paramidophenol-Hydrochloride)

An economical and highly successful developing agent, used in connection with Hydrochinon, for all developing-out papers.

It bears the Kodak Tested Chemical Seal.

THE PRICE

1 oz. bottle	. . . . .	\$ 1.10
$\frac{1}{4}$ lb. “	. . . . .	4.00
$\frac{1}{2}$ lb. “	. . . . .	7.75
1 lb. “	. . . . .	15.00

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

TOZOL

The Complete Developer

Requires the addition of no developing agent. It's right just as it is, and is prepared exactly as it was before the war.

The correct developer for Artura, Azo and Velox.

The Price

1 oz. bottle	\$1.10
$\frac{1}{4}$ lb. bottle	4.00
$\frac{1}{2}$ lb. bottle	7.75
1 lb. bottle	15.00

Canadian Kodak Co., Limited,

Toronto, Canada.

At your dealer's.

A reputation for promptness is a big asset, especially in a busy season—save time by using a



Rounds Print Washer

at the same time making certain your prints have been properly washed. Twenty minutes in a Rounds Washer is sufficient time to eliminate all hypo and insure thorough washing.

ROUNDS WASHER—MADE IN TWO SIZES

Capacity of 100 Cabinets or 4 x 6 prints,	\$12.00
Capacity of 200 Cabinets or 4 x 6 prints,	\$3.00

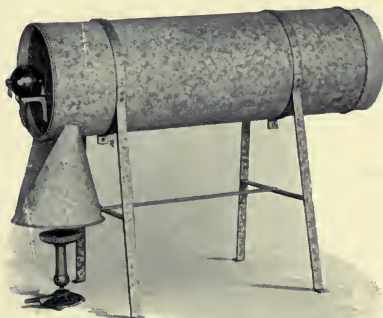
Out of the wash water—into the rolls of the

Improved Majestic Print Dryer No. 1

and your prints are properly shaped, bone dry and ready for mounting in from twenty to thirty minutes. The two rolls will dry from 1600 to 4000 prints in a day.

No. 1 MAJESTIC PRINT DRYER

Complete with two drying rolls, electric motor, fan, gas heater and stand, \$30.00
 Extra Drying Rolls complete, 11-inch, . . . 3.00
 Do., 7-inch, . . . 2.50
 Extra muslin faced blotters for 11-inch or 7-inch, 2.20



CANADIAN KODAK CO., LIMITED,

All Dealers'.

TORONTO, CANADA.

SOFT AZO K

In the brief time it has been on the market, Azo K has made itself solid with everyone who has tried it. No other paper of similar standard and price has afforded the same desirable qualities as K, and we have enlarged its field of usefulness by putting out Azo K Soft.

K Soft will conform to the same standard of contrast as do the other Soft Azos, and the same difference will prevail between K Soft and K Hard as between the other Soft and Hard Azos.

Available in Single and Double Weight papers, as well as post cards. Regular Azo prices apply.

Canadian Kodak Co., Limited,

Toronto, Canada

All Dealers'.

WANTED

OLD NEGATIVE GLASS

We will purchase Old Negative Glass, $4\frac{3}{4}$ x $6\frac{1}{2}$ and larger standard sizes, providing same is in good condition and packed carefully, in accordance with our instructions.

We will pay all the freight on shipments of 100 lbs. or more, except from localities where the freight rate exceeds \$1.00 per 100 lbs., in which case the shipper will be required to pay the excess.

Prices and further particulars will be furnished on application.

Canadian Kodak Co., Limited,

Toronto, Canada.

Department S.

The Kodak Safelight Lamp



A modified form of
the Wratten Safe-
light Lamp.

Price, \$4.00
With one Safelight (5 x 7) of
any series desired.

Made of metal, brown outside, inside
white to intensify the reflection from the
electric bulb in the top.

Dimensions, $8\frac{3}{4}$ inches high, $7\frac{1}{8}$ inches
wide and 6 inches deep. Four feet of cord
furnished with socket, but no bulb.

*A reliable lamp at a price within
the reach of all.*

Canadian Kodak Co., Limited,

Toronto, Canada.

At your dealers'.

THE luxuriously appointed studio employs Century Apparatus. Its rich finish and dignified efficiency harmonize perfectly with the most refined surroundings.

THE less pretentious studio *needs* Century equipment to dispel any feeling of uncertainty on the part of its patrons. In no other business is the buyer brought into contact with the mechanism for turning out the finished product.

WITH Century Apparatus your customers see that you have the best.

CENTURY CAMERA DIVISION
EASTMAN KODAK CO.
ROCHESTER, N. Y.

THE GIFT CALENDAR

A PRACTICAL BUSINESS BRINGER

In Olive and Swiss, Sepia and Brown Marble Combinations, for all Tones.
For 4 x 6 Square Prints—7 $\frac{3}{4}$ x 13 Outside Size.



The Gift Calendar, designed for the professional, is characterized by unusual color combinations of stocks—corner holders for the print—silk ring and ribbon and a specially designed pad—different than Calendars of previous years.

The Calendar is made with marble stock for the base, which is finished with a tinted border. The middle insert is of fabric finished deckled edge rag stock; the top insert of extra weight stock with etched edges and embossed raised corners, into which prints are inserted—all in splendid harmony. As all of the print shows, a larger effect than the usual 4 x 6 is produced.

The rich looking silk ring and ribbon is an ornament and a hanger combined. The pad is a specially designed cape style opening from center and is artistically printed in suitable colors. The monthly leaves can be torn off without destroying the beauty of the calendar. It will appeal to you and your customers as an unusually handsome, rich looking calendar.

Sample on receipt of eight 2c. stamps.

MANUFACTURED BY

Canadian Card Co., Toronto, Canada.

